HL7 EHR TC

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Chapter Three: Direct Care Functions

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Chapter 3: Direct Care EHR-S Functions

Direct care EHR-S functions are the subset of EHR-S functions that enable delivery of healthcare and offer clinical decision support.

1 Example

For example, when a child presents with symptoms of common cold, a Direct Care EHR-S Function will enable the doctor to record that event. Additionally, Clinical decision-support functions within the Direct Care EHR-S section will alert the provider that a vaccination is due and will offer contraindication alerts for the medication given to the child who has symptoms of a cold.

2 Actors

The principal users of these functions are expected to be authorized healthcare providers; the patient and/or subject of care will have access to certain functions to view, update or make corrections to their Electronic Health Record. The provider will receive appropriate decision support, as well as support from the EHR-S to enable effective electronic communication between providers, and between the provider and the patient/parent/caregiver.

3 Functional Outline – Direct Care

Direct Care	DC.1	Care Management
	DC.2	Clinical Decision Support
	DC.3	Operations Management and Communication

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
DC.1	**H**	**Care Management**	**Description:** Care Management functions (i.e. DC.1.x functions) are those directly used by providers as they deliver patient care and create an electronic health record. DC.1.1.x functions address the mechanics of creating a health record and concepts such as a single logical health record, managing patient demographics, and managing externally generated (including patient originated) health data. Thereafter, functions DC.1.2.x through DC.1.9.x follow a fairly typical flow of patient care activities and corresponding data, starting with managing the patient history and progressing through consents, assessments, care plans, orders, results etc. Integral to these care management activities is an underlying system foundation that maintains the privacy, security, and integrity of the captured health information – the information infrastructure of the EHR-S. Throughout the DC functions, conformance criteria formalize the relationships to Information Infrastructure functions. Criteria that apply to all DC.1 functions are listed in this header (see Conformance Clause page six for discussion of "inherited" conformance criteria). In the Direct Care functions there are times when actions/activities related to "patients" are also applicable to the patient representative. Therefore, in this section, the term "patient" could refer to		1. The system **SHALL** conform to function IN.1.1 (Entity Authentication).	1
					2. The system **SHALL** conform to function IN.1.2 (Entity Authorization).	2
					3. The system **SHALL** conform to function IN.1.3 (Entity Access Control).	3
					4. IF the system is used to enter, modify or exchange data, THEN the system **SHALL** conform to function IN.1.5 (Non-Repudiation), to guarantee that the sources and receivers of data cannot deny that they entered/sent/received the data.	4
					5. IF the system exchanges data outside of a secure network, THEN the system **SHALL** conform to Function IN.1.6 (Secure Data Exchange), to ensure that the data are protected.	5
					6. IF the system exchanges data outside of a secure network, THEN the system **SHALL** conform to Function IN.1.7 (Secure Data Routing), to ensure that the exchange occurs only among authorized senders and receivers.	6
					7. IF the system is used to enter or modify data in the health record, THEN the system **SHALL** conform to function IN.1.8 (Information Attestation), to show authorship and responsibility for the data.	7
					8. The system **SHALL** conform to function IN.1.9 (Patient Privacy and Confidentiality).	8
					9. The system **SHALL** conform to function IN.2.1 (Data Retention, Availability and Destruction).	9
					10. The system **SHOULD** conform to function IN.2.3 (Synchronization).	10
					11. IF the system is used to extract data for analysis and reporting, THEN the system **SHALL** conform to function IN.2.4 (Extraction of Health Record Information), to support data extraction across the complete health record of an individual.	11
					12. IF the system stores unstructured data, THEN the system **SHALL** conform to function IN.2.5.1 (Manage Unstructured Health Record Information), to ensure data integrity through all changes.	12

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			the patient and/or the patient's personal representative (e.g. guardian, surrogate).		13. IF the system stores structured data, THEN the system **SHALL** conform to function IN.2.5.2 (Manage Structured Health Record Information), to ensure data integrity through all changes.	13
					14. The system **SHOULD** conform to function IN.3 (Registry and Directory Services).	14
					15. IF the system processes data for which generally accepted standard terminologies have been established, THEN the system **SHALL** conform to function IN.4.1 (Standard Terminologies and Terminology Models), to support semantic interoperability.	15
					16. IF the system processes data for which generally accepted standard terminologies have been established, THEN the system **SHALL** conform to function IN.4.2 (Maintenance and Versioning of Standard Terminologies), to preserve the semantics of coded data over time.	16
					17. The system **SHOULD** conform to function IN.4.3 (Terminology Mapping).	17
					18. IF the system exchanges data for which generally accepted interchange standards have been established, THEN the system **SHALL** conform to function IN.5.1 (Interchange Standards), to support interoperability.	18
					19. IF the system exchanges data for which generally accepted interchange standards have been established, THEN the system **SHALL** conform to function IN.5.2 (Interchange Standards Versioning and Maintenance), to accommodate the inevitable evolution of interchange standards.	19
					20. The system **SHOULD** conform to function IN.5.3 (Standards-based Application Integration).	20
					21. IF the system exchanges data with other systems outside itself, THEN the system **SHALL** conform to function IN.5.4 (Interchange Agreements), to define how the sender and receiver will exchange data.	21
					22. The system **SHOULD** conform to function IN.6 (Business Rules Management).	22
					23. The system **SHOULD** conform to function IN.7 (Workflow Management).	23
					24. The system **SHALL** conform to function S.2.2.1 (Health Record Output).	24
DC.1.1	**H**	Record Management	**Statement**: **Description**: For those functions related to data capture, data may be captured	S.3.1.4		25

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			using standardized code sets or nomenclature, depending on the nature of the data, or captured as unstructured data. Care-setting dependent data is entered by a variety of caregivers. Details of who entered data and when it was captured should be tracked. Data may also be captured from devices or other tele-health applications.			
DC.1.1.1	**F**	Identify and Maintain a Patient Record	**Statement**: Identify and maintain a single patient record for each patient. **Description**: A single record is needed for legal purposes, as well as to organize it unambiguously for the provider. Health information is captured and linked to the patient record. Static data elements as well as data elements that will change over time are maintained. The patient is uniquely identified, after which the record is tied to that patient. Combining information on the same patient, or separating information where it was inadvertently captured for the wrong patient, helps maintain health information for a single patient. In the process of creating a patient record, it is at times advantageous to replicate identical information across multiple records, so that such data does not have to be re-entered. For example, when a parent registers children as new patients, the address, guarantor, and insurance data may be propagated in the children's records without having to re-enter them.	S.1.4.1 S.2.2.1 S.3.1.2 S.3.1.5 IN.2.1 IN.2.3	1. The system **SHALL** create a single logical record for each patient.	26
					2. The system **SHALL** provide the ability to create a record for a patient when the identity of the patient is unknown.	27
					3. The system **SHALL** provide the ability to store more than one identifier for each patient record.	28
					4. The system **SHALL** associate key identifier information (e.g., system ID, medical record number) with each patient record.	29
					5. The system **SHALL** provide the ability to uniquely identify a patient and tie the record to a single patient.	30
					6. The system **SHALL** provide the ability, through a controlled method, to merge or link dispersed information for an individual patient upon recognizing the identity of the patient.	31
					7. IF health information has been mistakenly associated with a patient, THEN the system **SHALL** provide the ability to mark the information as erroneous in the record of the patient in which it was mistakenly associated and represent that information as erroneous in all outputs containing that information.	32
					8. IF health information has been mistakenly associated with a patient, THEN the system **SHALL** provide the ability to associate it with the correct patient.	33
					9. The system **SHALL** provide the ability to retrieve parts of a patient record using a primary identifier, secondary identifiers, or other information which are not identifiers, but could be used to help identify the patient.	34

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
					10. The system **SHOULD** provide the ability to obsolete, inactivate, nullify, destroy and archive a patient's record in accordance with local policies and procedures, as well as applicable laws and regulations.	35
					11. IF related patients register with any identical data, THEN the system **SHOULD** provide the ability to propagate that data to all their records.	36
					12. The system **SHALL** conform to function IN.2.2 (Auditable Records).	37
DC.1.1.2	**F**	Manage Patient Demographics	**Statement**: Capture and maintain demographic information. Where appropriate, the data should be clinically relevant and reportable. **Description**: Contact information including addresses and phone numbers, as well as key demographic information such as date of birth, time of birth, gestation, gender, and other information is stored and maintained for unique patient identification, reporting purposes and for the provision of care. Patient demographics are captured and maintained as discrete fields (e.g., patient names and addresses) and may be enumerated, numeric or codified. Key patient identifiers are shown on all patient information output (such as name and ID# on each screen of a patient's record). The system will track who updates demographic information, and when the demographic information is updated.	S.1.4.1 S.2.2.2 IN.2.2 IN.2.4	1. The system **SHALL** capture demographic information as part of the patient record.	38
					2. The system **SHALL** store and retrieve demographic information as discrete data.	39
					3. The system **SHALL** provide the ability to retrieve demographic data as part of the patient record.	40
					4. The system **SHALL** provide the ability to update demographic data.	41
					5. The system **SHOULD** provide the ability to report demographic data.	42
					6. The system **SHOULD** store historical values of demographic data over time.	43
					7. The system **SHALL** present a set of patient identifying information at each interaction with the patient record.	44
					8. The system **SHOULD** conform to function IN.1.4 (Patient Access Management).	45
					9. The system **SHALL** conform to function IN.2.2 (Auditable Records).	46
DC.1.1.3	**H**	Data and Documentation from External Sources	**Description**: External sources are those outside the EHR system, including clinical, administrative, and financial information systems, other EHR systems, PHR systems, and data received through health information exchange networks.		1. The system **SHOULD** conform to function IN.1.4 (Patient Access Management).	47
					2. The system **SHALL** conform to function IN.2.2 (Auditable Records).	48
DC.1.1.3.1	**F**	Capture Data and Documentation from External Clinical Sources	**Statement**: Incorporate clinical data and documentation from external sources. **Description**: Mechanisms for incorporating external clinical data and documentation (including identification of	IN.1.5 IN.1.6 IN.1.7	1. The system **SHALL** provide the ability to capture external data and documentation.	49
					2. IF lab results are received through an electronic interface, THEN the system **SHALL** receive and store the data elements into the patient record.	50

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			source) such as image documents and other clinically relevant data are available. Data incorporated through these mechanisms is presented alongside locally captured documentation and notes wherever appropriate.	IN.1.8 IN.2.1 IN.2.2 IN.4.2 IN.4.3 IN.5.1 IN.5.2	3. IF lab results are received through an electronic interface, THEN the system **SHALL** display them upon request.	51
					4. The system **SHOULD** provide the ability to receive, store and display scanned documents as images.	52
					5. The system **MAY** provide the ability to store imaged documents or reference the imaged documents via links to imaging systems.	53
					6. The system **SHOULD** provide the ability to receive, store and present text-based externally-sourced documents and reports.	54
					7. The system **SHOULD** provide the ability to receive, store and display clinical result images (such as radiologic images) received from an external source.	55
					8. The system **SHOULD** provide the ability to receive, store and display other forms of clinical results (such as wave files of EKG tracings) received from an external source.	56
					9. The system **SHOULD** provide the ability to receive, store and present medication details from an external source.	57
					10. The system **SHOULD** provide the ability to receive, store and present structured text-based reports received from an external source.	58
					11. The system **SHOULD** provide the ability to receive, store and present standards-based structured, codified data received from an external source.	59
DC.1.1.3.2	**F**	Capture Patient-Originated Data	**Statement**: Capture and explicitly label patient-originated data, link the data source with the data, and support provider authentication for inclusion in patient health record. **Description**: It is critically important to be able to distinguish patient-originated data that is either provided or entered by a patient from clinically authenticated data. Patients may provide data for entry into the health record or be given a mechanism for entering this data directly. Patient-originated data intended for use by providers will be available for their use.	IN.1.4 IN.2.5.1 IN.2.5.2	1. The system **SHALL** capture and explicitly label patient-originated data.	60
					2. IF the system provides the ability for direct entry by the patient, THEN the system **SHALL** explicitly label the data as patient entered.	61
					3. The system **SHALL** capture and label the source of clinical data provided on behalf of the patient.	62

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			Data about the patient may be appropriately provided by: 1. the patient 2. a surrogate (parent, spouse, guardian) or 3. an informant (teacher, lawyer, case worker). An electronic health record may provide the ability for direct data entry by any of these. Patient-originated data may also be captured by devices and transmitted for inclusion into the electronic health record. Data entered by any of these must be stored with source information. A provider must authenticate patient-originated data included in the patient's legal health record.		4. The system **SHALL** present patient-originated data for use by care providers.	63
					5. The system **SHALL** provide the ability for a provider to verify the accuracy of patient-originated data for inclusion in the patient record.	64
					6. The system **SHOULD** provide the ability to view or comment, but not alter, patient-originated data.	65
DC.1.1.3.3	**F**	Capture Patient Health Data Derived from Administrative and Financial Data and Documentation	**Statement**: Capture and explicitly label patient health data derived from administrative or financial data; and link the data source with that data. **Description**: It is critically important to be able to distinguish patient health data derived from administrative or financial data from clinically authenticated data. Sources of administrative and financial data relating to a patient's health may provide this data for entry into the health record or be given a mechanism for entering this data directly. The data must be explicitly labeled as derived from administrative or financial data, and information about the source must be linked with that data. Patient health data that is derived from administrative or financial data may be provided by: 1. the patient 2. a provider 3. a payer, or 4. entities that transmit or process	DC.1.1.2 DC.1.2 S.1.4.1	1. The system **SHALL** provide the ability to capture and label patient health data derived from administrative or financial data.	66
					2. The system **SHALL** provide the ability to capture and link data about the source of patient health data derived from administrative and financial data with that patient data.	67
					3. The system **SHALL** provide the ability to present labeled patient health information derived from administrative or financial data and the source of that data for use by authorized users.	68
					4. The system **SHOULD** provide the ability to view or comment on patient health information derived from administrative or financial data.	69

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			administrative or financial data. Since this data is non-clinical, it may not be authenticated for inclusion in the patient's legal health record. Registration data, which may contain demographic data and pertinent positive and negative histories, is an example of administrative and financial data that may be captured.		5. The system **SHOULD** provide the ability to request correction of the administrative or financial data.	70
DC.1.1.4	**F**	Produce a Summary Record of Care	**Statement**: Present a summarized review of a patient's comprehensive EHR, subject to jurisdictional laws and organizational policies related to privacy and confidentiality. **Description**: Create summary views and reports at the conclusion of an episode of care. Create service reports at the completion of an episode of care such as, but not limited to, discharge summaries and public health reports, without additional input from clinicians.	S.2.2.1 IN.1.9 IN.2.4 IN.2.5.1 IN.2.5.2	1. The system **SHALL** present summarized views and reports of the patient's comprehensive EHR.	71
					2. The system **SHOULD** include at least the following in the summary: problem list, medication list, allergy and adverse reaction list.	72
					3. The system **SHOULD** conform to function S.3.3.6 (Health Service Reports at the Conclusion of an Episode of Care).	73
					4. The system **SHOULD** conform to function IN.1.4 (Patient Access Management).	74
					5. The system **SHALL** conform to function IN.2.2 (Auditable Records).	75
DC.1.1.5	**F**	Present Ad Hoc Views of the Health Record	**Statement**: Subject to jurisdictional laws and organizational policies related to privacy and confidentiality, present customized views and summarized information from a patient's comprehensive EHR. The view may be arranged chronologically, by problem, or other parameters, and may be filtered or sorted. **Description**: A key feature of an electronic health record is its ability to support the delivery of care by enabling prior information to be found and meaningfully displayed. EHR systems should facilitate search, filtering, summarization, and presentation of available data needed for patient care. Systems should enable views to be customized, for example, specific data may be organized chronologically, by	S.1.8 S.2.2.3 S.3.1.1 IN.1.3 IN.1.6 IN.1.7 IN.1.9 IN.2.4 IN.2.5.1 IN.2.5.2 IN.4.1 IN.4.2 IN.4.3	1. The system **SHALL** provide the ability to create views that prohibit patients from accessing certain information according to organizational policy, scope of practice, and jurisdictional law.	76
					2. The system **SHOULD** provide the ability to create customized views of summarized information based on sort and filter controls for date or date range, problem, or other clinical parameters.	77
					3. The system **SHOULD** provide the ability to access summarized information through customized views based on prioritization of chronology, problem, or other pertinent clinical parameters.	78
					4. The system **SHOULD** conform to function IN.1.4 (Patient Access Management).	79

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			clinical category, or by consultant, depending on need. Jurisdictional laws and organizational policies that prohibit certain users from accessing certain patient information must be supported.	IN.5.1 IN.5.2 IN.5.4 IN.6	5. The system **SHALL** conform to function IN.2.2 (Auditable Records).	80
DC.1.2	**F**	Manage Patient History	**Statement**: Capture and maintain medical, procedural/surgical, social and family history including the capture of pertinent positive and negative histories, patient-reported or externally available patient clinical history. **Description**: The history of the current illness and patient historical data related to previous medical diagnoses, surgeries and other procedures performed on the patient, and relevant health conditions of family members is captured through such methods as patient reporting (for example interview, medical alert band) or electronic or non-electronic historical data. This data may take the form of a pertinent positive such as: "The patient/family member has had..." or a pertinent negative such as "The patient/family member has not had..." When first seen by a health care provider, patients typically bring with them clinical information from past encounters. This and similar information is captured and presented alongside locally captured documentation and notes wherever appropriate.	S.2.2.1 S.3.5 IN.1.7 IN.2.5.1 IN.2.5.2 IN.4.1 IN.4.2 IN.4.3 IN.5.1 IN.5.2 IN.5.4	1. The system **SHALL** provide the ability to capture, update and present current patient history including pertinent positive and negative elements.	81
					2. The system **SHOULD** provide the ability to capture and present previous external patient histories.	82
					3. The system **MAY** provide the ability to capture the relationship between patient and others.	83
					4. The system **SHALL** capture the complaint, presenting problem or other reason(s) for the visit or encounter.	84
					5. The system **SHOULD** capture the reason for visit/encounter from the patient's perspective.	85
					6. The system **SHOULD** conform to function IN.1.4 (Patient Access Management).	86
					7. The system **SHALL** conform to function IN.2.2 (Auditable Records).	87
DC.1.3	**H**	Preferences, Directives, Consents and Authorizations			1. The system **SHOULD** conform to function IN.1.4 (Patient Access Management).	88
					2. The system **SHALL** conform to function IN.2.2 (Auditable Records).	89
DC.1.3.1	**F**	Manage Patient and Family Preferences	**Statement**: Capture and maintain patient and family preferences. **Description**: Patient and family preferences regarding issues such as	DC.2.1.4 S.3.7.1	1. The system **SHALL** provide the ability to capture, present, maintain and make available for clinical decisions patient preferences such as language, religion, spiritual practices and culture.	90

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			language, religion, spiritual practices and culture – may be important to the delivery of care. It is important to capture these so that they will be available to the provider at the point of care.	IN.2.5.1 IN.2.5.2 IN.6	2. The system **SHALL** provide the ability to capture, present, maintain and make available for clinical decisions family preferences such as language, religion, spiritual practices and culture.	91
					3. The system **SHOULD** conform to function DC.2.1.4 (Support for Patient and Family Preferences), and incorporate patient and family preferences into decision support systems.	92
DC.1.3.2	**F**	Manage Patient Advance Directives	**Statement**: Capture and maintain patient advance directives. **Description**: Patient advance directives and provider DNR orders are captured as well as the date and circumstances under which the directives were received, and the location of any paper records or legal documentation (e.g. the original) of advance directives as appropriate.	S.3.5.1 S.3.5.3 S.3.5.4 IN.1.5 IN.1.8 IN.1.9 IN.2.2 IN.2.5.1 IN.2.5.2 IN.6	1. The system **SHALL** provide the ability to indicate that advance directives exist for the patient.	93
					2. The system **SHALL** provide the ability to indicate the type of advance directives completed for the patient such as living will, durable power of attorney, preferred interventions for known conditions, or the existence of a "Do Not Resuscitate order".	94
					3. The system **SHOULD** provide the ability to capture, present, maintain and make available for clinical decisions patient advance directives documents and “Do Not Resuscitate” orders.	95
					4. The system **SHOULD** conform to function DC.1.1.3.1 (Capture Data and Documentation from External Clinical Sources) and capture scanned patient advance directive documents and “Do Not Resuscitate” orders.	96
					5. The system **SHOULD** provide the ability to indicate when advanced directives were last reviewed.	97
					6. The system **SHOULD** provide the ability to indicate the name and relationship of the party completing the advance directive for the patient.	98
					7. The system **SHALL** time and date stamp advance directives.	99
					8. The system **SHOULD** provide the ability to document the location and or source of any legal documentation regarding advance directives.	100
					9. The system **SHOULD** conform to function DC.2.1.4 (Support for Patient and Family Preferences).	101
DC.1.3.3	**F**	Manage Consents and Authorizations	**Statement**: Create, maintain, and verify patient decisions such as informed consent for treatment and authorization/consent for disclosure when required. **Description**: Decisions are documented	DC.1.1.3 S.2.2.2 S.3.5.1 S.3.5.4	1. The system **SHALL** provide the ability to indicate that a patient has completed applicable consents and authorizations.	102
					2. The system **SHALL** provide the ability to indicate that a patient has withdrawn applicable consents and authorizations.	103

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			and include the extent of information, verification levels and exposition of treatment options. This documentation helps ensure that decisions made at the discretion of the patient, family, or other responsible party, govern the actual care that is delivered or withheld. There may be several documents active at any one time that may govern a patient's care. Both clinical and administrative consents and authorizations are considered part of this function. A consent or authorization includes patient authorization for re-disclosure of sensitive information to third parties. Consents/Authorizations for printing should include appropriate standardized forms for patients, guardians, foster parents. The system must appropriately present forms for adolescents according to privacy rules. Some states may mandate assent. Assent is agreement by the patient to participate in services when they are legally unable to consent (e.g., an adolescent, an adult with early dementia).	IN.1.5 IN.1.8 IN.1.9 IN.2.2 IN.2.4 IN.2.5.1 IN.2.5.2 IN.6	3. The system **SHOULD** conform to function DC.1.1.3.1 (Capture Data and Documentation from External Clinical Sources) and capture scanned paper consent and authorization documents.	104
					4. The system **SHOULD** provide the ability to view and complete consent and authorization forms on-line.	105
					5. The system **MAY** provide the ability to generate printable consent and authorization forms.	106
					6. The system **MAY** display the authorizations associated with a specific clinical activity, such as treatment or surgery, along with that event in the patient's electronic chart.	107
					7. The system **MAY** provide the ability to display consents and authorizations chronologically.	108
					8. The system **SHOULD** provide the ability to document an assent for patients legally unable to consent.	109
					9. The system **SHALL** provide the ability to document the source of each consent, such as the patient or the patient's personal representative if the patient is legally unable to provide it.	110
					10. The system **SHOULD** provide the ability to document the patient's personal representative's level of authority to make decisions on behalf of the patient.	111
DC.1.4	**H**	Summary Lists		S.2.2.2 IN.2.4 IN.2.5.1 IN.2.5.2	1. The system **SHOULD** conform to function IN.1.4 (Patient Access Management).	112
					2. The system **SHALL** conform to function IN.2.2 (Auditable Records).	113
DC.1.4.1	**F**	Manage Allergy, Intolerance and Adverse Reaction List	**Statement**: Create and maintain patient-specific allergy, intolerance and adverse reaction lists. **Description**: Allergens, including immunizations, and substances are identified and coded (whenever possible) and the list is captured and maintained over time. All pertinent dates, including	DC.2.3.1.1 S.2.2.1 S.2.2.3 S.3.7.1 IN.2.5.1	1. The system **SHALL** provide the ability to capture true allergy, intolerance, and adverse reaction to drug, dietary or environmental triggers as unique, discrete entries.	114
					2. The system **SHOULD** provide the ability to capture the reason for entry of the allergy, intolerance or adverse reaction.	115
					3. The system **SHALL** provide the ability to capture the reaction type.	116

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			patient-reported events, are stored and the description of the patient allergy and adverse reaction is modifiable over time. The entire allergy history, including reaction, for any allergen is viewable. The list(s) includes all reactions including those that are classifiable as a true allergy, intolerance, side effect or other adverse reaction to drug, dietary or environmental triggers. Notations indicating whether item is patient reported and/or provider verified are maintained.	IN.2.5.2 IN.4.1 IN.4.2 IN.4.3 IN.6	4. The system **SHOULD** provide the ability to capture the severity of a reaction.	117
					5. The system **SHALL** provide the ability to capture a report of No Known Allergies (NKA) for the patient.	118
					6. The system **SHOULD** provide the ability to capture a report of No Known Drug Allergies (NKDA) for the patient.	119
					7. The system **SHOULD** provide the ability to capture the source of allergy, intolerance, and adverse reaction information.	120
					8. The system **SHALL** provide the ability to deactivate an item on the list.	121
					9. The system **SHALL** provide the ability to capture the reason for deactivation of an item on the list.	122
					10. The system **MAY** present allergies, intolerances and adverse reactions that have been deactivated.	123
					11. The system **MAY** provide the ability to display user defined sort order of list.	124
					12. The system **SHOULD** provide the ability to indicate that the list of medications and other agents has been reviewed.	125
					13. They system **SHALL** provide the ability to capture and display the date on which allergy information was entered.	126
					14. The system **SHOULD** provide the ability to capture and display the approximate date of the allergy occurrence.	127
DC.1.4.2	**F**	Manage Medication List	**Statement**: Create and maintain patient-specific medication lists. **Description**: Medication lists are managed over time, whether over the course of a visit or stay, or the lifetime of a patient. All pertinent dates, including medication start, modification, and end dates are stored. The entire medication history for any medication, including alternative supplements and herbal medications, is viewable. Medication lists are not limited to medication orders recorded by providers, but may include, for example, pharmacy dispense/supply records, patient-reported medications and additional information such as age specific dosage.	S.2.2.1 IN.2.5.1 IN.2.5.2 IN.4.1 IN.4.2 IN.4.3 IN.5.1 IN.5.2 IN.5.4 IN.6	1. The system **SHALL** provide the ability to capture patient-specific medication lists.	128
					2. The system **SHALL** display and report patient-specific medication lists.	129
					3. The system **SHALL** provide the ability to capture the details of the medication such as ordering date, dose, route, and SIG (description of the prescription, such as the quantity) when known.	130
					4. The system **SHOULD** provide the ability to capture other dates associated with medications such as start and end dates.	131
					5. The system **SHALL** provide the ability to capture medications not reported on existing medication lists or medication histories.	132
					6. The system **SHALL** provide the ability to capture non-prescription medications including over the counter and complementary medications such as vitamins, herbs and supplements.	133

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
					7. The system **SHALL** present the current medication lists associated with a patient.	134
					8. The system **SHOULD** present the medication history associated with a patient.	135
					9. The system **SHALL** present the medication, prescriber, and medication ordering dates when known.	136
					10. The system **SHALL** provide the ability to mark a medication as erroneously captured and excluded from the presentation of current medications.	137
					11. The system **SHALL** provide the ability to print a current medication list for patient use.	138
					12. The system **MAY** provide the ability to capture information regarding the filling of prescriptions (dispensation of medications by pharmacies or other providers).	139
DC.1.4.3	**F**	Manage Problem List	**Statement**: Create and maintain patient-specific problem lists. **Description**: A problem list may include, but is not limited to: Chronic conditions, diagnoses, or symptoms, functional limitations, visit or stay-specific conditions, diagnoses, or symptoms. Problem lists are managed over time, whether over the course of a visit or stay or the life of a patient, allowing documentation of historical information and tracking the changing character of problem(s) and their priority. The source (e.g. the provider, the system id, or the patient) of the updates should be documented. In addition all pertinent dates are stored. All pertinent dates are stored, including date noted or diagnosed, dates of any changes in problem specification or prioritization, and date of resolution. This might include time stamps, where useful and appropriate. The entire problem history for any problem in the list is viewable.	DC.2.1.3 S.2.2.1 S.3.3.5 IN.2.4 IN.2.5.1 IN.2.5.2 IN.4.1 IN.4.2 IN.4.3 IN.6	1. The system **SHALL** capture, display and report all active problems associated with a patient.	140
					2. The system **SHALL** capture, display and report a history of all problems associated with a patient.	141
					3. The system **SHALL** provide the ability to capture onset date of problem.	142
					4. The system **SHOULD** provide the ability to capture the chronicity (chronic, acute/self-limiting, etc.) of a problem.	143
					5. The system **SHALL** provide the ability to capture the source, date and time of all updates to the problem list.	144
					6. The system **SHALL** provide the ability to deactivate a problem.	145
					7. The system **MAY** provide the ability to re-activate a previously deactivated problem.	146
					8. The system **SHOULD** provide the ability to display inactive and/or resolved problems.	147
					9. The system **SHOULD** provide the ability to manually order/sort the problem list.	148
					10. The system **MAY** provide the ability to associate encounters, orders, medications, notes with one or more problems.	149
DC.1.4.4	**F**	Manage Immunization List	**Statement:** Create and maintain patient-specific immunization lists. **Description**: Immunization lists are		1. The system **SHALL** capture, display and report all immunizations associated with a patient	150

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			managed over time, whether over the course of a visit or stay, or the lifetime of a patient. Details of immunizations administered are captured as discrete data elements including date, type, manufacturer and lot number. The entire immunization history is viewable.		2. The system **SHALL** record as discrete data elements data associated with any immunization given including date, type, lot number and manufacturer	151
					3. The system **SHOULD** prepare a report of a patient 's immunization history upon request for appropriate authorities such as schools or day-care centers	152
DC.1.5	**F**	Manage Assessments	**Statement**: Create and maintain assessments. **Description**: During an encounter with a patient, the provider will conduct an assessment that is germane to the age, gender, developmental or functional state, medical and behavioral condition of the patient, such as growth charts, developmental profiles, and disease specific assessments. Wherever possible, this assessment should follow industry standard protocols although, for example, an assessment for an infant will have different content than one for an elderly patient. When a specific standard assessment does not exist, a unique assessment can be created, using the format and data elements of similar standard assessments whenever possible.	DC.1.5 DC.1.6.2 DC.1.10.1 DC.2.1.1 DC.2.1.2 DC.2.2.1 S.2.2.1 IN.1.6 IN.2.5.1 IN.2.5.2 IN.4.1 IN.4.2 IN.4.3 IN.5.1 IN.5.2 IN.6	1. The system **SHALL** provide the ability to create assessments.	153
					2. The system **SHOULD** provide the ability to use standardized assessments where they exist.	154
					3. The system **SHOULD** provide the ability to document using standard assessments germane to the age, gender, developmental state, and health condition as appropriate to the EHR user's scope of practice.	155
					4. The system **SHOULD** provide the ability to capture data relevant to standard assessment.	156
					5. The system **SHOULD** provide the ability to capture additional data to augment the standard assessments relative to variances in medical conditions.	157
					6. The system **SHOULD** provide the ability to link data from a standard assessment to a problem list.	158
					7. The system **SHOULD** provide the ability to link data from a standard assessment to an individual care plan.	159
					8. The system **MAY** provide the ability to link data from external sources, laboratory results, and radiographic results to the standard assessment.	160
					9. The system **SHOULD** provide the ability to compare documented data against standardized curves and display trends.	161
					10. The system **SHOULD** conform to function IN.1.4 (Patient Access Management).	162
					11. The system **SHALL** conform to function IN.2.2 (Auditable Records).	163
DC.1.6	**H**	Care Plans, Treatment Plans, Guidelines, and Protocols				164
DC.1.6.1	**F**	Present Guidelines and Protocols for Planning Care	**Statement**: Present organizational guidelines for patient care as appropriate to support planning of care, including	DC.1.1.2 DC.2.2.1.1	1. The system **SHALL** provide the ability to present current guidelines and protocols to clinicians who are creating plans for treatment and care.	165

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			order entry and clinical documentation. **Description**: Guidelines, and protocols presented for planning care may be site specific, community or industry-wide standards.	DC.2.2.1.2 DC.2.2.2 DC.2.2.3 DC.2.7.1 S.3.7.1 IN.6	2. The system **SHOULD** provide the ability to search for a guideline or protocol based on appropriate criteria (such as problem).	166
					3. The system **SHOULD** provide the ability to present previously used guidelines and protocols for historical or legal purposes.	167
					4. IF decision support prompts are used to support a specific clinical guideline or protocol, THEN the system **SHALL** conform to function DC.1.8.6 (Manage Documentation of Clinician Response to Decision Support Prompts).	168
					5. The system **SHALL** conform to function DC.2.2.1.2 (Support for Context-Sensitive Care Plans, Guidelines, Protocols).	169
					6. The system **SHOULD** conform to function IN.2.2 (Auditable Records).	170
DC.1.6.2	**F**	Manage Patient-Specific Care and Treatment Plans	**Statement**: Provide administrative tools for healthcare organizations to build care plans, guidelines and protocols for use during patient care planning and care. **Description**: Care plans, guidelines or protocols may contain goals or targets for the patient, specific guidance to the providers, suggested orders, and nursing interventions, among other items. Tracking of implementation or approval dates, modifications and relevancy to specific domains or context is provided. Transfer of treatment and care plans may be implemented electronically using, for example, templates, or by printing plans to paper.	DC.3.1.1 DC.3.1.2 DC.3.1.3 IN.2.2 IN.2.5.1 IN.2.5.2 IN.6	1. The system **SHALL** provide the ability to capture patient-specific plans of care and treatment.	171
					2. The system **SHALL** conform to DC.1.6.1 (Present Guidelines and Protocols for Planning Care) and provide the ability to use locally or non-locally developed templates, guidelines, and protocols for the creation of patient-specific plans of care and treatment.	172
					3. The system **SHALL** provide the ability to use previously developed care plans as a basis for the creation of new plans of care and treatment.	173
					4. The system **SHALL** provide the ability to track updates to a patient's plan of care and treatment including authors, creation date, version history, references, local sources and non-local sources in accordance with scope of practice, organizational policy and jurisdictional law.	174
					5. The system **SHOULD** provide the ability to coordinate order sets with care plans.	175
					6. The system **SHOULD** provide the ability to derive order sets from care plans.	176
					7. The system **SHOULD** provide the ability to derive care plans from order sets.	177
					8. The system **SHALL** provide the ability to transfer plans of care and treatment to other care providers.	178
					9. The system **SHOULD** conform to function DC.3.1.1 (Clinical Task Assignment and Routing) and incorporate care plan items in the tasks assigned and routed.	179

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
					10. The system **SHOULD** conform to function DC.3.1.2 (Clinical Task Linking) and incorporate care plan items in the tasks linked.	180
					11. The system **SHOULD** conform to function DC.3.1.3 (Clinical Task Tracking) and incorporate care plan items in the tasks tracked.	181
					12. The system **SHALL** conform to function IN.2.2 (Auditable Records).	182
DC.1.7	**H**	Orders and Referrals Management			1. The system **SHALL** conform to function IN.2.2 (Auditable Records).	183
DC.1.7.1		Manage Medication Orders	**Statement:** Create prescriptions or other medication orders with detail adequate for correct filling and administration. Provide information regarding compliance of medication orders with formularies. **Description**: Different medication orders, including discontinue, refill, and renew, require different levels and kinds of detail, as do medication orders placed in different situations. The correct details are recorded for each situation. Administration or patient instructions are available for selection by the ordering clinicians, or the ordering clinician is facilitated in creating such instructions. The system may allow for the creation of common content for prescription details. Appropriate time stamps for all medication related activity are generated. This includes series of orders that are part of a therapeutic regimen, e.g. Renal Dialysis, Oncology. When a clinician places an order for a medication, that order may or may not comply with a formulary specific to the patient's location or insurance coverage, if applicable. Whether the order complies with the formulary should be communicated to the ordering clinician at an appropriate point to allow the ordering clinician to decide whether to continue with the order. Formulary-compliant	DC.2.3.1.1 DC.2.3.1.2 DC.2.3.1.3 DC.2.4.2 DC.3.2.2 S.2.2.1 S.3.3.2 S.3.7.2 IN.2.4 IN.2.5.2 IN.4.1 IN.4.2 IN.4.3 IN.5.1 IN.5.2 IN.5.4 IN.6	1. The system **SHALL** provide the ability to create prescription or other medication orders with the details adequate for correct filling and administration captured as discrete data.	184
					2. The system **SHALL** capture user and date stamp for all prescription related events.	185
					3. The system **SHALL** conform to function DC.1.4.2 (Manage Medication List) and update the appropriate medication list with the prescribed medications (in case of multiple medication lists).	186
					4. The system **SHALL** provide a list of medications to search, including both generic and brand name.	187
					5. The system **SHALL** provide the ability to maintain a discrete list of orderable medications.	188
					6. The system **SHALL** conform to function DC.1.7.2.1 (Manage Non-Medication Patient Care Orders) and provide the ability to order supplies associated with medication orders in accordance with scope of practice, organizational policy or jurisdictional law.	189
					7. The system **MAY** make common content available for prescription details to be selected by the ordering clinician.	190
					8. The system **MAY** provide the ability for the ordering clinician to create prescription details as needed.	191
					9. The system **MAY** make available common patient medication instruction content to be selected by the ordering clinician.	192
					10. The system **MAY** provide the ability to include prescriptions in order sets.	193
					11. The system **MAY** provide a list of frequently-ordered medications by diagnosis by provider which could include the full details of the medication, including SIG, quantity, refills, DAW, etc.	194

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			alternatives to the medication being ordered may also be presented.		12. The system **MAY** provide the ability to select drugs by therapeutic class and/or indication.	195
					13. The system **MAY** conform to function S.3.3.2 (Eligibility Verification and Determination of Coverage) and display the results of electronic prescription eligibility and health plan/payer formulary checking.	196
					14. The system **MAY** provide the ability to re-prescribe medication by allowing a prior prescription to be reordered without re-entering previous data (e.g. administration schedule, quantity).	197
					15. The system **SHOULD** provide the ability to re-prescribe a medication from a prior prescription using the same dosage but allow for editing of details adequate for correct filling and administration of medication (e.g. dose, frequency, body weight).	198
					16. The system **SHOULD** conform to function DC.2.3.1.1 (Support for Drug Interaction Checking) and check and report allergies, drug-drug interactions, and other potential adverse reactions, when new medications are ordered.	199
					17. The system **SHOULD** conform to function DC.2.3.1.2 (Support for Patient Specific Dosing and Warnings) and check and report other potential adverse reactions, when new medications are ordered.	200
					18. The system **SHOULD** provide the ability to create prescriptions in which the weight-specific dose is suggested.	201
					19. The system **SHOULD** conform to function DC.2.3.1.3 (Support for Medication Recommendations).	202
DC.1.7.2	**H**	Non-Medication Orders and Referrals Management				203
DC.1.7.2.1	**F**	Manage Non-Medication Patient Care Orders	**Statement**: Capture and track patient care orders. Enable the origination, documentation, and tracking of non-medication patient care orders. **Description**: Non-medication orders that request actions or items can be captured and tracked including new, renewal and discontinue orders. Examples include orders to transfer a patient between units,	DC.2.4.1 DC.2.4.2 S.2.2.1 S.3.3.3 S.3.7.1 IN.1.6	1. The system **SHALL** provide the ability to capture non-medication patient care orders for an action or item	204
					2. The system **SHALL** provide the ability to capture adequate order detail for correct order fulfillment	205
					3. The system **SHALL** track the status of the ordered action or item	206
					4. The system **SHOULD** provide the ability to capture patient instructions necessary for correct order fulfillment	207

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			to ambulate a patient, for medical supplies, durable medical equipment, home IV, and diet or therapy orders. Each item ordered includes the appropriate detail, such as order identification and instructions. Orders should be communicated to the correct service provider for completion.	IN.1.7 IN.2.5.1 IN.2.5.2 IN.6	5. The system **SHOULD** provide the ability to present patient instructions necessary for correct order fulfillment	208
					6. The system **SHOULD** provide the ability to communicate the order to the correct recipient(s) for order fulfillment	209
					7. The system **SHALL** conform to DC.2.4.2 (Support for Non-Medication Ordering)	210
DC.1.7.2.2	**F**	Manage Orders for Diagnostic Tests	**Statement**: Enable the origination, documentation, and tracking of orders for diagnostic tests. **Description**: Orders for diagnostic tests (e.g. diagnostic radiology, blood test) are captured and tracked including new, renewal and discontinue orders. Each order includes appropriate detail, such as order identification, instructions and clinical information necessary to perform the test. Orders and supporting detailed documentation shall be communicated to the service provider for completion of the diagnostic test(s). Some systems may contain instructions, but in some settings, instructions may be provided from external sources (e.g., handouts).	DC.2.4.5.2 S.2.2.1 S.3.7.1 IN.1.6 IN.1.7 IN.2.5.1 IN.2.5.2 IN.6	1. The system **SHALL** provide the ability to capture orders for diagnostic tests.	211
					2. The system **SHALL** provide the ability to capture adequate order detail for correct diagnostic test fulfillment.	212
					3. The system **SHALL** provide the ability to track the status of diagnostic test(s).	213
					4. The system **SHOULD** provide the ability to capture and present patient instructions relevant to the diagnostic test ordered.	214
					5. The system **SHALL** communicate orders to the service provider of the diagnostic test.	215
					6. The system **SHOULD** communicate supporting detailed documentation to the correct service provider of the diagnostic test.	216
					7. The system **SHALL** conform to DC.2.4.2 (Support for Non-Medication Ordering).	217
DC.1.7.2.3	**F**	Manage Orders for Blood Products and Other Biologics	**Statement**: Communicate with appropriate sources or registries to manage orders for blood products or other biologics. **Description**: Interact with a blood bank system or other source to support orders for blood products or other biologics including discontinuance orders. Use of such products in the provision of care is captured. Blood bank or other functionality that may come under jurisdictional law or other regulation (e.g. by the FDA in the United States) is not required; functional communication with such a system is required.	DC.2.4.5.1 S.1.1 S.1.2	1. The system **SHALL** provide the ability to interface with systems of blood banks or other sources to manage orders for blood products or other biologics.	218
					2. The system **SHALL** provide the ability to capture use of such products in the provision of care.	219
					3. The system **SHOULD** conform to function S.1.1 (Registry Notification).	220

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
DC.1.7.2.4	**F**	Manage Referrals	**Statement**: Enable the origination, documentation and tracking of referrals between care providers or healthcare organizations, including clinical and administrative details of the referral, and consents and authorizations for disclosures as required. **Description**: Documentation and tracking of a referral from one care provider to another is supported, whether the referred to or referring providers are internal or external to the healthcare organization. Guidelines for whether a particular referral for a particular patient is appropriate in a clinical context and with regard to administrative factors such as insurance may be provided to the care provider at the time the referral is created.	DC.1.9.3 DC.2.4.4.1 DC.2.4.4.2 S.1.3.1a S.1.3.5 S.3.3.2 S.3.3.3 IN.1.6 IN.1.7 IN.2.5.1 IN.2.5.2	1. The system **SHALL** provide the ability to capture and communicate referral(s) to other care provider (s), whether internal or external to the organization.	221
					2. The system **SHALL** provide the ability to capture clinical details as necessary for the referral.	222
					3. The system **SHALL** provide the ability to capture administrative details (such as insurance information, consents and authorizations for disclosure) as necessary for the referral.	223
					4. The system **SHALL** present captured referral information.	224
					5. The system **SHOULD** provide the ability to capture completion of a referral appointment.	225
					6. The system **SHOULD** provide diagnosis based clinical guidelines for making a referral.	226
					7. The system **MAY** provide order sets for referral preparation.	227
					8. The system **SHALL** provide the ability to document transfer of care according to organizational policy, scope of practice, and jurisdictional law.	228
DC.1.7.3	**F**	Manage Order Sets	**Statement**: Provide order sets based on provider input or system prompt. **Description**: Order sets, which may include medication and non-medication orders, allow a care provider to choose common orders for a particular circumstance or disease state according to standards or other criteria. Recommended order sets may be presented based on patient data or other contexts.	DC.2.4.1 IN.2.5.1 IN.2.5.2 IN.6	1. The system **SHALL** provide the ability to present order set(s).	229
					2. The system **SHALL** provide the ability to order at the patient level from presented order sets.	230
					3. The system **SHALL** provide the ability to record each component of an order set that is ordered.	231
					4. The system **SHALL** conform to function DC.2.4.1 (Support for Order Sets).	232
					5. The system **MAY** provide the ability for a provider to choose from among the order sets pertinent to a certain disease or other criteria.	233
DC.1.8	**H**	Documentation of Care, Measurements and Results			1. The system **SHALL** conform to function IN.2.2 (Auditable Records)	234
DC.1.8.1	**F**	Manage Medication Administration	**Statement**: Present providers with the list of medications that are to be administered to a patient, necessary administration information, and capture administration details. **Description**: In a setting in which	DC.1.1.1 DC.2.3.1.1 DC.2.3.1.2 DC.2.3.2	1. The system **SHALL** present the list of medications to be administered.	235
					2. The system **SHALL** display the timing, route of administration, and dose of all medications on the list.	236

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			medication orders are to be administered by a provider rather than the patient, the necessary information is presented including: the list of medication orders that are to be administered; administration instructions, times or other conditions of administration; dose and route, etc. The system shall securely relate medications to be administered to the unique identity of the patient (see DC.1.1.1). Additionally, the provider can record what actually was or was not administered, whether or not these facts conform to the order. Appropriate time stamps for all medication related activity are generated. For some settings that administer complete sets of medications from a variety of providers' orders, it may be useful to provide an additional check for possible drug-drug or other interactions.	S.2.2.1 S.2.2.3 IN.1.1 IN.1.2 IN.1.3 IN.1.7 IN.1.9 IN.2.4 IN.2.5.1 IN.2.5.2 IN.6	3. The system **SHOULD** display instructions for administration of all medications on the list.	237
					4. The system **MAY** notify the clinician when specific doses are due.	238
					5. The system **MAY** conform to function DC.2.3.1.1 (Support for Drug Interaction Checking) and check and report allergies, drug-drug interactions, and other potential adverse reactions, when new medications are about to be given.	239
					6. The system **MAY** conform to function DC.2.3.1.2 (Support for Patient Specific Dosing and Warnings) and check and report other potential adverse reactions, when new medications are about to be given.	240
					7. The system **SHALL** provide the ability to capture medication administration details – including timestamps, observations, complications, and reason if medication was not given – in accordance with organizational policy, scope of practice, and jurisdictional law.	241
					8. The system **SHALL** securely relate interventions to be administered to the unique identity of the patient.	242
DC.1.8.2	**F**	Manage Immunization Administration	**Statement**: Capture and maintain discrete data concerning immunizations given to a patient including date administered, type, manufacturer, lot number, and any allergic or adverse reactions. Facilitate the interaction with an immunization registry to allow maintenance of a patient's immunization history. **Description**: During an encounter, recommendations based on accepted immunization schedules are presented to the provider. Allergen and adverse reaction histories are checked prior to giving the immunization. If an immunization is administered, discrete data elements associated with the	DC.1.3.2 S.1.1 S.2.2.2 S.3.7.1 IN.1.6 IN.1.7 IN.2.4 IN.2.5.1 IN.2.5.2 IN.3.1 IN.3.2	1. The system **SHALL** provide the ability to recommend required immunizations, and when they are due, during an encounter based on widely accepted immunization schedules.	243
					2. The system **SHOULD** provide the ability to recommend required immunizations based on patient risk factors.	244
					3. The system **SHALL** perform checking for potential adverse or allergic reactions for all immunizations when they are about to be given.	245
					4. The system **SHALL** provide the ability to capture immunization administration details, including date, type, lot number and manufacturer.	246
					5. The system **SHOULD** provide the ability to capture other clinical data pertinent to the immunization administration (e.g. vital signs).	247
					6. The system **SHALL** record as discrete data elements data associated with any immunization.	248

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			immunization including date, type, manufacturer and lot number are recorded. Any new adverse or allergic reactions are noted. If required, a report is made to the public health immunization registry.	IN.4.1 IN.4.2 IN.4.3 IN.5.1 IN.5.2 IN.6	7. The system **SHOULD** provide the ability to associate standard codes with discrete data elements associated with an immunization.	249
					8. The system **SHALL** provide the ability to update the immunization schedule.	250
					9. The system **SHOULD** provide the ability to prepare a report of a patient's immunization history upon request for appropriate authorities such as schools or day-care centers.	251
					10. The system **SHALL** conform to function DC.1.4.1 (Manage Allergy, Intolerance and Adverse Reaction Lists).	252
					11. The system **SHOULD** transmit required immunization information to a public health immunization registry.	253
					12. The system **SHOULD** receive immunization histories from a public health immunization registry.	254
DC.1.8.3	**F**	Manage Results	**Statement**: Present, annotate, and route current and historical test results to appropriate providers or patients for review. Provide the ability to filter and compare results. **Description**: Results of tests are presented in an easily accessible manner to the appropriate providers. Flow sheets, graphs, or other tools allow care providers to view or uncover trends in test data over time. In addition to making results viewable, it is often necessary to send results to appropriate providers using electronic messaging systems, pagers, or other mechanisms. Documentation of notification is accommodated. Results may also be routed to patients electronically or by letter.	DC.2.4.3 S.2.2.1 S.3.7.1 IN.1.6 IN.1.7 IN.2.4 IN.2.5.1 IN.2.5.2 IN.6	1. The system **SHALL** provide the ability to present numerical and non-numerical current and historical test results to the appropriate provider.	255
					2. The system **SHALL** provide the ability to filter results for a unique patient.	256
					3. The system **SHALL** provide the ability to filter results by factors that supports results management, such as type of test and date range.	257
					4. The system **SHOULD** indicate normal and abnormal results depending on the data source.	258
					5. The system **SHOULD** provide the ability to filter lab results by range, e.g. critical, abnormal or normal.	259
					6. The system **SHOULD** display numerical results in flow sheets, graphical form, and allow comparison of results.	260
					7. The system **SHALL** provide the ability to group tests done on the same day.	261
					8. The system **SHOULD** notify relevant providers (ordering, copy to) that new results have been received.	262
					9. The system **SHOULD** provide the ability for the user, to whom a result is presented, to acknowledge the result.	263
					10. The system **SHOULD** provide the ability to route results to other appropriate care providers, such as nursing home, consulting physicians, etc.	264
					11. The system **MAY** route results to patients by methods such as phone, fax, electronically or letter.	265

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
					12. The system **SHOULD** provide the ability for providers to pass on the responsibility to perform follow up actions to other providers.	266
					13. The system **MAY** provide the ability for an authorized user to group results into clinically logical sections.	267
					14. The system **SHOULD** trigger decision support algorithms from the results.	268
					15. IF the system contains the electronic order, THEN the results **SHALL** be linked to a specific order.	269
					16. The system **MAY** provide the ability for providers to annotate a result.	270
					17. The system **MAY** display a link to an image associated with results.	271
DC.1.8.4	**F**	Manage Patient Clinical Measurements	**Statement**: Capture and manage patient clinical measures, such as vital signs, as discrete patient data. **Description**: Patient measures such as vital signs are captured and managed as discrete data to facilitate reporting and provision of care. Other clinical measures (such as expiratory flow rate, size of lesion, etc.) are captured and managed, and may be discrete data.	IN.2.5.1 IN.2.5.2	1. IF required by the scope practice, THEN the system **SHALL** capture patient vital signs such as blood pressure, temperature, heart rate, respiratory rate, and severity of pain as discrete elements of structured or unstructured data.	272
					2. IF required by the scope of practice, THEN the system **SHALL** capture psychiatric symptoms and daily functioning as structured or unstructured data.	273
					3. The system **SHOULD** capture other clinical measures such as peak expiratory flow rate, size of lesions, oxygen saturation, height, weight, and body mass index as discrete elements of structured or unstructured data.	274
					4. The system **SHOULD** compute and display percentile values when data with normative distributions are entered.	275
					5. The system **MAY** provide normal ranges for data based on age and other parameters such as height, weight, ethnic background, gestational age.	276
DC.1.8.5	**F**	Manage Clinical Documents and Notes	**Statement**: Create, addend, correct, authenticate and close, as needed, transcribed or directly-entered clinical documentation and notes. **Description**: Clinical documents and notes may be unstructured and created in a narrative form, which may be based on a template, graphical, audio, etc.. The documents may also be structured documents that result in the capture of coded data. Each of these forms of clinical documentation is important and	IN.2.2 IN.2.5.1 IN.2.5.2	1. The system **SHALL** provide the ability to capture clinical documentation (henceforth "documentation") including original, update by amendment in order to correct, and addenda.	277
					2. The system **SHALL** provide the ability to capture free text documentation.	278
					3. The system **MAY** present documentation templates (structured or free text) to facilitate creating documentation.	279
					4. The system **SHALL** provide the ability to view other documentation within the patient's logical record while creating documentation.	280

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			appropriate for different users and situations.		5. The system **SHOULD** provide the ability to associate documentation for a specific patient with a given event, such as an office visit, phone communication, e-mail consult, lab result, etc.	281
					6. The system **SHOULD** provide the ability to associate documentation with problems and/or diagnoses.	282
					7. The system **SHALL** provide the ability to update documentation prior to finalizing it.	283
					8. The system **SHALL** provide the ability to finalize a document or note.	284
					9. The system **SHALL** provide the ability to attribute record and display the identity of all users contributing to or finalizing a document or note, including the date and time of entry (see appropriate criteria in IN.2.2 (Auditable Records)).	285
					10. The system **SHALL** present captured documentation.	286
					11. The system **MAY** provide the ability to filter, search or sort notes.	287
					12. The system **SHOULD** provide documentation templates for data exchange.	288
DC.1.8.6	**F**	Manage Documentation of Clinician Response to Decision Support Prompts	**Statement**: Capture the decision support prompts and manage decisions to accept or override decision support prompts. **Description**: Clinician actions in response to decision support prompts are captured and can be managed at the patient level or aggregated for organizational trending.	S.3.7.1 IN.2.5.1 IN.2.5.2 IN.6	1. The system **SHALL** provide the ability to capture clinical decision support prompts and user decisions to accept or override those prompts.	289
					2. The system **SHALL** provide the ability to record the reason for variation from the decision support prompt.	290
					3. The system **SHOULD** provide the ability to display recorded variances upon request by authorized users of the EHR.	291
DC.1.9	**F**	Generate and Record Patient-Specific Instructions	**Statement**: Generate and record patient-specific instructions related to pre- and post-procedural and post- discharge requirements. **Description**: When a patient is scheduled for a test, procedure, or discharge, specific instructions about diet, clothing, transportation assistance, convalescence, follow-up with physician, etc., may be generated and recorded, including the timing relative to the scheduled event.	DC.2.2.4 DC.2.7.2 DC.3.2.3 DC.3.2.4 S.3.7.2 S.3.7.3 IN.1.8	1. The system **SHALL** provide the ability to generate instructions pertinent to the patient for standardized procedures.	292
					2. The system **SHALL** provide the ability to generate instructions pertinent to the patient based on clinical judgment.	293
					3. The system **SHALL** provide the ability to include details on further care such as follow up, return visits and appropriate timing of further care.	294
					4. The system **SHALL** provide the ability to record that instructions were given to the patient.	295

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
				IN.2.2 IN.6	5. The system **SHALL** provide the ability to record the actual instructions given to the patient or reference the document(s) containing those instructions.	296
					6. The system **SHALL** conform to function IN.2.2 (Auditable Records).	297
DC.2	**H**	**Clinical Decision Support**			1. The system **SHALL** conform to function IN.1.1 (Entity Authentication).	298
					2. The system **SHALL** conform to function IN.1.2 (Entity Authorization).	299
					3. The system **SHALL** conform to function IN.1.3 (Entity Access Control).	300
					4. IF the system is used to enter, modify or exchange data, THEN the system **SHALL** conform to function IN.1.5 (Non-Repudiation), to guarantee that the sources and receivers of data cannot deny that they entered/sent/received the data.	301
					5. IF the system exchanges data outside of a secure network, THEN the system **SHALL** conform to function IN.1.6 (Secure Data Exchange), to ensure that the data are protected.	302
					6. IF the system exchanges outside of a secure network, THEN the system **SHALL** conform to function IN.1.7 (Secure Data Routing), to ensure that the exchange occurs only among authorized senders and receivers.	303
					7. IF the system is used to enter or modify data in the health record, THEN the system **SHALL** conform to function IN.1.8 (Information Attestation), to show authorship and responsibility for the data.	304
					8. The system **SHALL** conform to function IN.2.1 (Data Retention, Availability and Destruction).	305
					9. The system **SHOULD** conform to function IN.2.3 (Synchronization).	306
					10. IF the system is used to extract data for analysis and reporting, THEN the system **SHALL** conform to function IN.2.4 (Extraction of Health Record Information), to support data extraction across the complete health record of an individual.	307
					11. IF the system stores unstructured data, THEN the system **SHALL** conform to function IN.2.5.1 (Manage Unstructured Health Record Information), to ensure data integrity through all changes.	308

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
					12. IF the system stores structured data, THEN the system **SHALL** conform to function IN.2.5.2 (Manage Structured Health Record Information), to ensure data integrity through all changes.	309
					13. IF the system processes data for which generally accepted standard terminologies have been established, THEN the system **SHALL** conform to function IN.4.1 (Standard Terminologies and Terminology Models), to support semantic interoperability.	310
					14. IF the system processes data for which generally accepted standard terminologies have been established, THEN the system **SHALL** conform to function IN.4.2 (Maintenance and Versioning of Standard Terminologies), to preserve the semantics of coded data over time.	311
					15. The system **SHOULD** conform to function IN.4.3 (Terminology Mapping).	312
					16. IF the system exchanges data for which generally accepted interchange standards have been established, THEN the system **SHALL** conform to function IN.5.1 (Interchange Standards), to support interoperability.	313
					17. IF the system exchanges data for which generally accepted interchange standards have been established, THEN the system **SHALL** conform to function IN.5.2 (Interchange Standards Versioning and Maintenance), to accommodate the inevitable evolution of interchange standards.	314
					18. The system **SHOULD** conform to function IN.5.3 (Standards-based Application Integration).	315
					19. IF the system exchanges data with other systems outside itself, THEN the system **SHALL** conform to function IN.5.4 (Interchange Agreements), to define how the sender and receiver will exchange data.	316
					20. The system **SHOULD** conform to function IN.6 (Business Rules Management).	317
					21. The system **SHOULD** conform to function IN.7 (Workflow Management).	318
DC.2.1	**H**	Manage Health Information to Provide Decision Support			1. The system **SHOULD** conform to function IN.1.4 (Patient Access Management).	319
					2. The system **SHALL** conform to function IN.1.9 (Patient Privacy and Confidentiality).	320
					3. The system **SHALL** conform to function IN.2.2 (Auditable Records).	321

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
					4. The system **SHOULD** conform to function IN.3 (Registry and Directory Services).	322
DC.2.1.1	**F**	Support for Standard Assessments	**Statement**: Offer prompts to support the adherence to care plans, guidelines, and protocols at the point of information capture. **Description**: When a clinician fills out an assessment, data entered triggers the system to prompt the assessor to consider issues that would help assure a complete/accurate assessment. A simple demographic value or presenting problem (or combination) could provide a template for data gathering that represents best practice in this situation, e.g. Type II diabetic review, fall and 70+, rectal bleeding, etc.	DC.1.4 DC.1.5 S.3.7.1 IN.2.3 IN.2.4 IN.6	1. The system **SHALL** provide the ability to access the standard assessment in the patient record.	323
					2. The system **SHALL** provide the ability to access to health standards and practices appropriate to the EHR user's scope of practice.	324
					3. The system **SHOULD** provide the ability to compare elements of assessments captured by the clinician and those available as best practices and/or evidence based resources.	325
					4. The system **MAY** provide the ability to derive supplemental assessment data from evidence based standard assessments, practice standards, or other generally accepted, verifiable, and regularly updated standard clinical sources.	326
					5. The system **SHOULD** provide prompts based on practice standards to recommend additional assessment functions.	327
					6. The system **SHOULD** conform to function DC.1.4.3 (Manage Problem List) and provide the ability to update the problem list by activating new problems and de-activating old problems as identified by conduct of standard assessments.	328
					7. The system **SHOULD** provide the ability to create standard assessments that correspond to the problem list.	329
					8. The system **SHOULD** conform to function DC 2.1.2 (Support for Patient Context-driven Assessments).	330
DC.2.1.2	**F**	Support for Patient Context- Driven Assessments	**Statement**: Offer prompts based on patient-specific data at the point of information capture for assessment purposes. **Description**: When a clinician fills out an assessment, data entered is matched against data already in the system to identify potential linkages. For example, the system could scan the medication list and the knowledge base to see if any of the symptoms are side effects of medication already prescribed. Important diagnoses could be brought to the doctor's attention, for instance ectopic pregnancy in a woman of child bearing	DC.1.4 DC.1.5 S.3.7.1 IN.2.3 IN.2.4 IN.6	1. The system **SHALL** provide the ability to access health assessment data in the patient record	331
					2. The system **SHOULD** provide the ability to compare assessment data entered during the encounter and the accessed health evidence based standards and best practices	332
					3. The system **SHOULD** provide the ability to compare health data and patient context-driven assessments to practice standards in order to prompt additional testing, possible diagnoses, or adjunctive treatment	333
					4. The system **SHOULD** provide the ability to correlate assessment data and the data in the patient specific problem list	334
					5. The system **SHALL** conform to function DC 2.1.1 (Support for Standard Assessments)	335

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			age who has abdominal pain.		6. The system **SHALL** conform to function DC.1.5 (Manage Assessments)	336
					7. The system **SHOULD** conform to function DC.1.4.3 (Manage Problem List)	337
DC.2.1.3	**F**	Support for Identification of Potential Problems and Trends	**Statement**: Identify trends that may lead to significant problems, and provide prompts for consideration. **Description**: When personal health information is collected directly during a patient visit, input by the patient, or acquired from an external source (lab results), it is important to be able to identify potential problems and trends that may be patient-specific, given the individual's personal health profile, or changes warranting further assessment. For example: significant trends (lab results, weight); a decrease in creatinine clearance for a patient on metformin, an abnormal increase in INR for a patient on warfarin, an increase in suicidal ideation; presence of methamphetamines; or absence of therapeutic levels of antidepressants.	DC.1.4 DC.1.5 S.3.7.1 S.3.7.2 S.3.7.4 IN.6	1. The system **SHALL** conform to function DC.1.5 (Manage Assessments) and provide the ability to access standard assessment data in the patient record.	338
					2. The system **SHOULD** provide the ability to access health standards and practices appropriate to the EHR user's scope of practice at the time of the encounter.	339
					3. The system **SHOULD** provide the ability to compare patient context-driven assessments and additional health information to best practices in order to identify patient specific growth or development patterns, health trends and potential health problems.	340
					4. The system **SHOULD** provide the ability to configure rules defining abnormal trends.	341
					5. The system **SHOULD** prompt the provider with abnormal trends.	342
					6. The system **SHOULD** prompt the provider for additional assessments, testing or adjunctive treatment.	343
					7. The system **SHOULD** conform to function DC.1.8.6 (Manage Documentation of Clinician Response to Decision Support Prompts).	344
					8. The system **MAY** provide the ability to integrate health information contained in the record with appropriate teaching materials.	345
					9. The system **SHOULD** conform to function DC 2.2.1.2 (Support for Context-sensitive Care Plans, Guidelines, Protocols).	346
DC.2.1.4	**F**	Support for Patient and Family Preferences	**Statement**: Support the integration of patient and family preferences into clinical decision support. **Description**: Decision support functions should permit consideration of patient/family preferences and concerns, such as with language, religion, culture, medication choice, invasive testing, and advance directives. Such preferences should be captured in a manner that	DC.1.1.4 DC.1.6.1 DC.1.6.2 DC.1.6.3 DC.1.11.1 DC.1.11.2 DC.2.2.1.1	1. The system **SHALL** conform to DC.1.3.1 (Manage Patient and Family Preferences).	347
					2. The system **SHALL** provide for the ability to capture and manage patient and family preferences as they pertain to current treatment plans.	348
					3. The system **SHALL** provide the ability to update care guidelines and options relating to documented patient and family preferences, including standards of practice e.g. treatment options for individuals who refuse blood transfusions.	349

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			allows for their integration with the health record and easy retrieval from the health record. Preferences may be specified across all treatment plans or specifically to a treatment plan.	DC.2.2.1.2 DC.2.2.2 S.3.7.1 S.3.7.2 S.3.7.4 IN.6	4. The system **SHOULD** provide the ability to compare care guidelines and options relating to documented patient and family preferences, including standards of practice.	350
					5. The system **SHOULD** prompt the provider for testing and treatment options based on patient and family preferences and provide the ability to compare to standard practice.	351
					6. The system **MAY** provide the ability to integrate preferences with appropriate teaching materials.	352
					7. The system **SHOULD** provide the ability to integrate necessary documentation of preferences, such as living wills, specific consents or releases.	353
					8. The system **SHALL** conform to function DC.1.3.2 (Manage Patient Advance Directives).	354
DC.2.2	**H**	Care and Treatment Plans, Guidelines and Protocols		DC.1.2	1. The system **SHALL** conform to function IN.1.9 (Patient Privacy and Confidentiality).	355
					2. The system **SHALL** conform to function IN.2.2 (Auditable Records).	356
DC.2.2.1	**H**	Support for Condition Based Care and Treatment Plans, Guidelines, Protocols			1. The system **SHOULD** conform to function IN.1.4 (Patient Access Management).	357
					2. The system **SHOULD** conform to function IN.3 (Registry and Directory Services).	358
DC.2.2.1.1	**F**	Support for Standard Care Plans, Guidelines, Protocols	**Statement**: Support the use of appropriate standard care plans, guidelines and/or protocols for the management of specific conditions. **Description**: Before they can be accessed upon request (e.g., in DC 1.6.1), standard care plans, protocols, and guidelines must be created. These documents may reside within the system or be provided through links to external sources, and can be modified and used on a site specific basis. To facilitate retrospective decision support, variances from standard care plans, guidelines, and protocols can be identified and reported.	DC 1.6.1	1. The system **SHALL** conform to function DC.1.6.1 (Present Guidelines and Protocols for Planning Care) and provide the ability to access standard care plans, protocols and guidelines when requested within the context of a clinical encounter.	359
					2. The system **MAY** provide the ability to create and use site-specific care plans, protocols, and guidelines.	360
					3. The system **MAY** provide the ability to make site-specific modifications to standard care plans, protocols, and guidelines obtained from outside sources.	361
					4. The system **SHOULD** identify, track and provide alerts, notifications and reports about variances from standard care plans, guidelines and protocols.	362
					5. The system **SHALL** conform to DC.2.2.1.2 (Support for Context-Sensitive Care Plans, Guidelines, Protocols).	363
					6. The system **SHALL** conform to DC.2.1.1 (Support for Standard Assessments).	364

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
DC.2.2.1.2	**F**	Support for Context-Sensitive Care Plans, Guidelines, Protocols	**Statement**: Identify and present the appropriate care plans, guidelines and/or protocols for the management of patient specific conditions that are identified in a patient clinical encounter. **Description**: At the time of the clinical encounter (problem identification), recommendations for tests, treatments, medications, immunizations, referrals and evaluations are presented based on evaluation of patient specific data such as age, gender, developmental stage, their health profile, and any site-specific considerations. These may be modified on the basis of new clinical data at subsequent encounters.	DC 1.3.1 DC 1.4 DC 1.5 DC 1.6 DC.1.6.1 DC.1.6.3 S.2.2.1 IN.2.4 IN.6	1. The system **SHALL** provide the ability to access care and treatment plans that are sensitive to the context of patient data and assessments.	365
					2. The system **MAY** provide the ability to capture care processes across the continuum of care.	366
					3. The system **MAY** present care processes from across the continuum of care.	367
					4. The system **MAY** provide the ability to document the choice of action in response to care plan suggestions.	368
					5. The system **SHOULD** identify, track and provide alerts, notifications and reports about variances from standard care plans, guidelines and protocols.	369
					6. The system **SHALL** conform to function DC.2.2.1.1 (Support for Standard Care Plans, Guidelines, Protocols).	370
					7. The system **SHALL** conform to function DC.2.1.1 (Support for Standard Assessments).	371
					8. The system **SHALL** conform to function DC.2.1.2 (Support for Patient Context-Driven Assessments).	372
DC.2.2.2	**F**	Support Consistent Healthcare Management of Patient Groups or Populations	**Statement**: Provide the ability to identify and consistently manage healthcare, over time and across populations or groups of patients, that share diagnoses, problems, functional limitations, treatment, medications, and demographic characteristics that may impact care, e.g. population management, disease management, wellness management or care management. **Description**: Populations or groups of patients that share diagnoses (such as diabetes or hypertension), problems, functional limitations, treatment, medication, and demographic characteristics such as race, ethnicity, religion, socio-economic status that may impact care are identified for the clinician. The clinician is advised and assisted with management of these patients to optimize the clinician's ability to provide appropriate care. For	DC.2.2.1.2 S.2.2.2 IN.2.2 IN.6	1. The system **SHALL** conform to DC.2.2.1.2 (Support for Context-Sensitive Care Plans, Guidelines, Protocols).	373
					2. The system **SHALL** provide the ability to identify patients eligible for healthcare management protocols based on criteria identified within the protocol.	374
					3. The system **SHOULD** provide the ability to include or exclude a patient from an existing healthcare management protocol group.	375
					4. The system **SHOULD** provide the ability to audit compliance of selected populations and groups that are the subjects of healthcare management protocols.	376

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			example, a clinician is alerted to racial, cultural, religious, socio-economic, living situation and functional accommodations of the patient that are required to provide appropriate care. A further example-- the clinician may be notified of eligibility for a particular test, therapy, or follow-up; availability of supportive resources in the community; or results from audits of compliance of these populations with disease management protocols.		5. The system **SHALL** conform to function S.2.2.2 (Standard Report Generation).	377
					6. The system **SHOULD** conform to function IN.3 (Registry and Directory Services).	378
DC.2.2.3	**F**	Support for Research Protocols Relative to Individual Patient Care	**Statement**: Provide support for the management of patients enrolled in research protocols. **Description**: The clinician is presented with appropriate protocols for patients participating in research studies, and is supported in the management and tracking of study participants.	S.1.1 S.1.5 S.2.2.2 S.3.3.1 IN.1.1 IN.1.2 IN.1.3 IN.1.9 IN.2.2 IN.2.4 IN.4.1 IN.4.2 IN.4.3 IN.5.1 IN.5.2 IN.5.4 IN.6 IN.7	1. The system **SHALL** provide the ability to present protocols for patients enrolled in research studies.	379
					2. The system **SHALL** provide the ability to maintain research study protocols.	380
					3. The system **SHOULD** conform to function S.3.3.1 (Enrollment of Patients), to enable participation in research studies.	381
					4. The system **SHOULD** provide the ability to identify and track patients participating in research studies.	382
					5. The system **MAY** provide the ability to capture appropriate details of patient condition and response to treatment as required for patients enrolled in research studies.	383
					6. The system **SHALL** conform to function S.2.2.2 (Standard Report Generation).	384
					7. The system **SHOULD** conform to function IN.1.4 (Patient Access Management).	385
					8. IF research protocols require standardized transmission of data to/from a registry or directory, THEN the system **SHALL** conform to function IN.3 (Registry and Directory Services).	386
DC.2.2.4	**F**	Support Self-Care	**Statement**: Provide the patient with decision support for self-management of a condition between patient-provider	DC.1.1.4 DC.1.11.1	1. The system **SHALL** provide the ability to present patient guidance and reminders appropriate for self-management of clinical conditions.	387

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			encounters. **Description**: Patients with specific conditions need to follow self-management plans that may include schedules for home monitoring, lab tests, and clinical check ups; recommendations about nutrition, physical activity, tobacco use, etcetera; and guidance or reminders about medications. Information to support self-care may be appropriately provided to: 1. the patient 2. a surrogate (parent, spouse, guardian), or 3. others involved directly in the patients self care	S.3.7.1 S.3.7.2 S.3.7.3 IN.1.4 IN.1.9 IN.6	2. The system **SHALL** provide the ability to manage and/or develop patient guidance and reminders related to specific clinical conditions.	388
					3. The system **SHOULD** conform to function DC.1.1.3.2 (Capture of Patient Originated Data).	389
					4. The system **SHOULD** conform to function DC.1.3.1 (Manage Patient and Family Preferences).	390
					5. The system **SHOULD** conform to function IN.1.4 (Patient Access Management).	391
					6. The system **SHOULD** conform to function IN.3 (Registry and Directory Services).	392
DC.2.3	**H**	Medication and Immunization Management			1. The system **SHALL** conform to function IN.1.9 (Patient Privacy and Confidentiality).	393
					2. The system **SHALL** conform to function IN.2.2 (Auditable Records).	394
					3. The system **SHOULD** conform to function IN.3 (Registry and Directory Services).	395
DC.2.3.1	**H**	Support for Medication and Immunization Ordering				396
DC.2.3.1.1	**F**	Support for Drug Interaction Checking	**Statement**: Identify drug interaction warnings time of medication ordering. **Description**: The clinician is alerted to drug-drug, drug-allergy, and drug-food interactions at levels appropriate to the health care setting and with respect to the patient condition. These alerts may be customized to suit the user or group. If the patient's condition is one where, in order to view the necessary components of the health record, patient authorization or consent is required, then the system should show the medication but mask the condition for which the medication is prescribed until the required consent or authorization is available. In an	S.3 IN.2.4 IN.6	1. The system **SHALL** check for and alert providers to interactions between prescribed drugs and medications on the current medication list.	397
					2. The system **SHALL** relate medication allergies to medications to facilitate allergy checking decision support for medication orders.	398
					3. The system **SHOULD** provide the ability to document that a provider was presented with and acknowledged a drug interaction warning.	399
					4. The system **SHALL** provide the ability to prescribe a medication despite alerts for interactions and/or allergies being present.	400
					5. The system **MAY** provide the ability to set the severity level at which warnings should be displayed.	401
					6. The system **SHOULD** provide the ability to check for duplicate therapies.	402

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			emergent situation, where all health information is required to provide the most effective treatment, and it is not possible to obtain an authorization or consent, the system should provide an override function to allow access to the diagnosis or problem for which a medication was ordered. This may vary based on jurisdictional law.		7. The system **SHOULD** conform to DC.1.8.6 (Manage Documentation of Clinician Response to Decision Support Prompts) and provide the ability to document why a drug interaction warning was overridden.	403
					8. The system **MAY** check for interactions between prescribed drugs and food detailing changes in a drug's effects potentially caused by food (including beverages) consumed during the same time period.	404
					9. The system **SHOULD** check for drug-lab interactions, to indicate to the prescriber that certain lab test results may be impacted by a patient's drugs.	405
					10. The system **SHOULD** provide the ability to check medications against a list of drugs noted to be ineffective for the patient in the past.	406
					11. The system **SHOULD** identify contraindications between a drug and patient conditions at the time of medication ordering.	407
DC.2.3.1.2	**F**	Support for Patient Specific Dosing and Warnings	**Statement**: Identify and present appropriate dose recommendations based on known patient- conditions and characteristics at the time of medication ordering. **Description**: The clinician is alerted to drug-condition interactions and patient specific contraindications and warnings e.g. pregnancy, breast-feeding or occupational risks, hepatic or renal insufficiency. The preferences of the patient may also be presented e.g. reluctance to use an antibiotic. Additional patient parameters, such as age, gestation, Ht, Wt, BSA, shall also be incorporated.	DC.2.3.1.1 IN.6	1. The system **SHALL** provide the ability to identify an appropriate drug dosage range, specific for each known patient condition and parameter at the time of medication ordering.	408
					2. The system **SHALL** provide the ability to automatically alert the provider if contraindications to the ordered dosage range are identified.	409
					3. The system **SHALL** provide the ability for the provider to override a drug dosage warning.	410
					4. The system **SHOULD** provide the ability to document reasons for overriding a drug alert or warning at the time of ordering.	411
					5. The system **SHOULD** transmit documented reasons for overriding a drug alert to the pharmacy to enable communication between the clinician and the pharmacist.	412
					6. The system **SHOULD** conform to function IN.1.4 (Patient Access Management).	413
					7. IF the maximum daily doses are known, THEN the system **SHALL** apply the maximum dose per day in dosing decision support.	414
					8. The system **SHOULD** compute drug doses, based on appropriate dosage ranges, using the patient's body weight.	415

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
					9. The system **SHOULD** provide the ability to specify an alternative "dosing weight" for the purposes of dose calculation.	416
					10. The system SHOULD perform drug dosage functions using any component of a combination drug (e.g., acetaminophen-hydrocodone).	417
					11. The system **SHOULD** provide the ability to record the factors used to calculate the future dose for a given prescription.	418
DC.2.3.1.3	**F**	Support for Medication Recommendations	**Statement**: The system should provide recommendations and options in medication and monitoring on the basis of patient diagnosis, cost, local formularies or therapeutic guidelines and protocols. **Description**: Offer alternative medications on the basis of practice standards (e.g. cost or adherence to guidelines), a generic brand, a different dosage, a different drug, or no drug (watchful waiting). Suggest lab order monitoring as indicated by the medication or the medical condition to be affected by the medication. Support expedited entry of series of medications that are part of a treatment regimen, i.e. renal dialysis, Oncology, transplant medications, etc.	DC 2.3.1.2 S.3.3.2 IN.6	1. The system **SHOULD** conform to function DC 2.3.1.2 (Support for Patient-Specific Dosing and Warnings).	419
					2. The system **SHOULD** present recommendations for medication regimens based on findings related to the patient diagnosis.	420
					3. The system **SHALL** present alternative treatments in medications on the basis of practice standards, cost, formularies, or protocols.	421
					4. The system **SHOULD** present suggested lab monitoring as appropriate to a particular medication.	422
					5. The system **SHOULD** conform to function IN.1.4 (Patient Access Management).	423
DC.2.3.2	**F**	Support for Medication and Immunization Administration	**Statement**: Alert providers to potential administration errors (such as wrong patient, wrong drug, wrong dose, wrong route and wrong time) in support of safe and accurate medication administration and support medication administration workflow. **Description**: To reduce medication errors at the time of administration of a medication, the patient is positively identified; checks on the drug, the dose, the route and the time are facilitated. Documentation is a by-product of this checking; administration details and additional patient information, such as injection site, vital signs, and pain	DC.1.3.3 DC.1.7.2 DC.1.10.1 DC.2.7.1 S.1.4.1 S.2.2.2 S.3.7.1 IN.2.3 IN.2.4 IN.6	1. The system **SHALL** present information necessary to correctly identify the patient and accurately administer medications and immunizations such as patient name, medication name, strength, dose, route and frequency.	424
					2. The system **SHALL** alert providers to potential administration errors such as wrong patient, wrong drug, wrong dose, wrong route and wrong time as it relates to medication and immunizations administration.	425
					3. The system **SHOULD** alert providers to potential medication administration errors at the point of medication administration.	426
					4. The system **SHALL** provide the ability to capture all pertinent details of the medication administration including medication name, strength, dose, route, time of administration, exceptions to administration, and administrator of the medication.	427

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			assessments, are captured. Access to drug monograph information may be provided to allow providers to check details about a drug and enhance patient education. Workflow for medication administration is supported through prompts and reminders regarding the "window" for timely administration of medications.		5. IF required by the EHR user's scope of practice, THEN the system **SHALL** capture the administrator of the immunization and the immunization information identified in DC.1.8.2 (Manage Immunization Administration), Conformance Criteria #4 (The system **SHALL** provide the ability to capture immunization administration details, including date, type, lot number and manufacturer).	428
					6. The system **MAY** generate documentation of medication or immunization administration as a by-product of verification of patient, medication, dose, route and time.	429
					7. The system **SHOULD** prompt or remind providers regarding the date/time range for timely administration of medications.	430
					8. The system **MAY** suggest alternative administration techniques based on age, developmental stage, weight, physiological status, mental status, educational level, and past physical history of the patient.	431
					9. The system **MAY** conform to function DC.2.7.1 (Access Healthcare Guidance) and provide to the ability for a provider to access drug monograph information.	432
DC.2.4	**H**	Orders, Referrals, Results and Care Management			1. The system **SHALL** conform to function IN.1.9 (Patient Privacy and Confidentiality).	433
					2. The system **SHALL** conform to function IN.2.2 (Auditable Records).	434
					3. The system **SHOULD** conform to function IN.3 (Registry and Directory Services).	435
DC.2.4.1	**F**	Create Order Set Templates	**Statement**: Create, capture, maintain and display order set templates based on patient data or preferred standards or other criteria. **Description**: Order set templates, which may include medication orders, allow a care provider to choose common orders for a particular circumstance or disease state according to standards or other criteria. Recommended order sets may be presented based on patient data or other contexts.	DC.1.9.3 S.2.2.2 S.3.7.1 IN.1.1 IN.1.2 IN.1.3 IN.6	1. The system **SHALL** provide the ability to create order set templates.	436
					2. The system **SHALL** provide the ability to maintain order set templates, including version control.	437
					3. The system **MAY** provide the ability to create order set templates from provider input.	438
					4. The system **MAY** capture order sets based on patient data that may be provided by the provider or that may be in accordance with preferred standards.	439
					5. The system **MAY** provide the ability to create order set templates for known conditions for a particular disease.	440
					6. The system **SHALL** present the order set templates to the provider.	441
					7. The system **MAY** record the basis of the practice standards or criteria for the creation of the order set templates.	442

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
					8. The system **MAY** provide the ability to relate order set templates to aid decision support for certain diseases.	443
					9. The system **SHALL** conform to DC.1.7.3 (Manage Order Sets).	444
DC.2.4.2	**F**	Support for Non-Medication Ordering	**Statement**: Display and request provider validation of information necessary for non-medication orders that make the order pertinent, relevant and resource-conservative at the time of provider order entry. **Description**: Possible order entry support includes, but is not limited to: notification of missing results required for the order, suggested corollary orders, notification of duplicate orders, institution-specific order guidelines, guideline-based orders/order sets, order sets, order reference text, patient diagnosis specific recommendations pertaining to the order. Also, warnings for orders that may be inappropriate or contraindicated for specific patients (e.g. X-rays for pregnant women) are presented. Non-medication orders include orders such as: • supplies such as 4x4's and ACE bandages • non-medical devices such as TTY phones for the hearing impaired • groups of supplies or kits common to an organization • simple durable medical equipment (DME) such as crutches or walkers • complex DME such as wheelchairs and hospital beds • therapies and other services that may require a referral and/or an authorization for insurance coverage	S.3.3.3 IN.6	1. The system **SHALL** identify required order entry components for non-medication orders.	445
					2. The system **SHALL** present an alert at the time of order entry, if a non-medication order is missing required information.	446
					3. The system **SHOULD** present an alert via warnings of orders that may be inappropriate or contraindicated for specific patients at the time of provider order entry.	447
					4. The system **SHOULD** conform to function S.3.3.3. (Service Authorizations).	448

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
DC.2.4.3	**F**	Support for Result Interpretation	**Statement**: Evaluate results and notify provider of results within the context of the patient's healthcare data. **Description**: Possible result interpretations include, but are not limited to: abnormal result evaluation/notification, trending of results (such as discrete lab values), evaluation of pertinent results at the time of provider order entry (such as evaluation of lab results at the time of ordering a radiology exam), evaluation of incoming results against active medication orders.	S.2.2.2 S.3.7.1 IN.2.4 IN.6	1. The system **SHALL** present alerts for a result that is outside of a normal value range.	449
					2. The system **SHOULD** provide the ability to trend results.	450
					3. The system **MAY** provide the ability to evaluate pertinent results at the time of provider order entry (such as evaluation of lab results at the time of ordering a radiology exam).	451
DC.2.4.4	**H**	Support for Referrals				452
DC.2.4.4.1	**F**	Support for Referral Process	**Statement**: Evaluate referrals within the context of a patient's healthcare data. **Description**: When a healthcare referral is made, health information, including pertinent clinical and behavioral health results, demographic and insurance data elements (or lack thereof) are presented to the provider. Standardized or evidence based protocols for appropriate workup prior to referral may be presented.	S.1.3.1a S.1.3.5 S.2.2.2 S.3.3.2 IN.2.4 IN.6	1. The system **SHALL** provide the ability to include clinical and administrative data (e.g. insurance information) as part of the referral process.	453
					2. The system **SHALL** provide the ability to include test and procedure results with a referral.	454
					3. The system **MAY** provide the ability to include standardized or evidence based protocols with the referral.	455
					4. The system **SHOULD** allow clinical, administrative data, and test and procedure results to be transmitted to the referral clinician.	456
					5. The system **SHALL** conform to function S.2.2.1 (Health Record Output).	457
DC.2.4.4.2	**F**	Support for Referral Recommendations	**Statement**: Evaluate patient data and recommend that a patient be referred based on the specific patient's healthcare data. **Description**: Entry of specific patient conditions may lead to recommendations for referral e.g. for smoking cessation counseling if the patient is prescribed a medication to support cessation screening or assessment for behavioral health conditions.	S.3.7.1 IN.6	1. The system **SHALL** present recommendations for potential referrals based on diagnosis(es).	458
					2. The system **SHALL** present recommendations for potential referrals based on patient condition (e.g. for smoking cessation counseling if the patient is prescribed a medication to support cessation).	459
					3. The system **SHOULD** conform to IN.1.4 (Patient Access Management).	460
DC.2.4.5	**H**	Support for Care Delivery				461

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
DC.2.4.5.1	**F**	Support for Safe Blood Administration	**Statement**: Provide checking in real-time for potential blood administration errors. **Description**: To reduce errors at the time of blood product administration, the patient is positively identified. Additionally, checks on blood product identification, amount to be delivered, route and time of administration are captured, and alerts are provided as appropriate.	DC.1.10.2 S.1.2 S.2.2.1 IN.6	1. The system **SHALL** present information necessary to correctly identify the patient and accurately administer blood products including patient name, blood product number, amount, route, product expiration date and time of administration.	462
					2. The system **SHALL** capture validation of the correct matching of the patient to the blood product.	463
					3. The system **SHALL** capture the blood product number, amount, route and time of administration.	464
					4. The system **SHALL** conform to function DC.1.8.4 (Manage Patient Clinical Measurements) and capture the blood pressure, temperature, pulse, respirations of the patient receiving the product.	465
					5. The system **SHALL** conform to function S.2.2.1 (Health Record Output).	466
DC.2.4.5.2	**F**	Support for Accurate Specimen Collection	**Statement**: Provide checking to ensure accurate specimen collection is supported. **Description**: To ensure the accuracy of specimen collection, the patient and specimen are positively identified. The provider is notified in real-time of potential collection errors such as wrong patient, wrong specimen type, wrong means of collection, wrong site, and wrong date and time.	S.1.4.1 S.2.2.1 IN.1.6 IN.1.7 IN.1.9 IN.2.3 IN.2.4 IN.6	1. The system **SHALL** provide the ability to present information necessary to correctly identify the patient and accurately identify the specimen to be collected including, but not limited to, patient name, specimen type, specimen source, means of collection, date and time.	467
					2. The system **SHALL** report variation between the type of specimen order placed and actual specimen received.	468
					3. The system **SHALL** capture the details of specimen collection.	469
					4. The system **SHALL** conform to function S.2.2.1 (Health Record Output).	470
					5. The system **SHOULD** notify the provider in real-time of a variation between the type of specimen order placed and the actual specimen received.	471
DC.2.5	**H**	Support for Health Maintenance: Preventive Care and Wellness			1. The system **SHOULD** conform to function IN.1.4 (Patient Access Management).	472
					2. The system **SHALL** conform to function IN.1.9 (Patient Privacy and Confidentiality).	473
					3. The system **SHALL** conform to function IN.2.2 (Auditable Records).	474
					4. The system **SHOULD** conform to function IN.3 (Registry and Directory Services).	475
DC.2.5.1	**F**	Present Alerts for Preventive Services and Wellness	**Statement**: At the point of clinical decision making, identify patient specific suggestions/reminders, screening tests/exams, and other preventive	DC.2.5.1 DC.2.5.2	1. The system **SHALL** provide the ability to establish criteria for the identification of preventive care and wellness services based on patient demographics (e.g. age, gender).	476

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			services in support of routine preventive and wellness patient care standards. **Description**: At the time of an encounter, the provider or patient is presented with due or overdue activities based on protocols for preventive care and wellness. Examples include but are not limited to, routine immunizations, adult and well child care, age and gender appropriate screening exams, such as PAP smears. The provider may wish to provide reminders to the patient based on the alert.	DC.2.6.2 IN.6	2. The system **SHOULD** provide the ability to modify the established criteria that trigger the alerts.	477
					3. The system **SHOULD** present recommended preventative or wellness services needed based upon clinical test results.	478
					4. The system **SHALL** present alerts to the provider of all patient specific preventive services that are due.	479
					5. The system **MAY** provide the ability to produce a list of all alerts along with the scheduled date and time for the preventive service.	480
					6. The system **MAY** provide the ability to produce a history of all alerts that were generated for the patient in the record.	481
DC.2.5.2	**F**	Notifications and Reminders for Preventive Services and Wellness	**Statement**: Between healthcare encounters, notify the patient and/or appropriate provider of those preventive services, tests, or behavioral actions that are due or overdue. **Description**: The provider can generate notifications to patients regarding activities that are due or overdue and these communications can be captured. Examples include but are not limited to time sensitive patient and provider notification of: follow-up appointments, laboratory tests, immunizations or examinations. The notifications can be customized in terms of timing, repetitions and administration reports. E.g. a PAP test reminder might be sent to the patient two months prior to the test being due, repeated at three month intervals, and then reported to the administrator or clinician when nine months overdue.	S.3.7.2 S.3.7.4 IN.6	1. The system **SHOULD** generate timely notifications to patients including services, tests or actions that are due or overdue.	482
					2. The system **SHOULD** capture a history of notifications.	483
					3. The system **SHOULD** provide the ability to track overdue preventive services.	484
					4. The system **SHOULD** provide notification of overdue preventative services in the patient record.	485
					5. The system **MAY** provide the ability to configure patient notifications (such as repetitions or timing of the activity).	486
					6. The system **SHOULD** provide the ability to update content of notifications, guidelines, reminders and associated reference materials.	487
					7. The system **MAY** provide the ability to manage the lifecycle of the states of the notifications and reminders.	488
DC.2.6	**H**	Support for Population Health			1. The system **SHALL** conform to function IN.1.9 (Patient Privacy and Confidentiality).	489
					2. The system **SHALL** conform to function IN.2.2 (Auditable Records).	490

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
DC.2.6.1	**F**	Support for Epidemiological Investigations of Clinical Health Within a Population.	**Statement**: Support internal and external epidemiological investigations of clinical health of aggregate patient data for use in identifying health risks from the environment and/or population in accordance with jurisdictional law. **Description**: Standardized surveillance performance measures that are based on known patterns of disease presentation can be identified by aggregating data from multiple input mechanisms. For example, elements include, but are not limited to patient demographics, resource utilization, presenting symptoms, acute treatment regimens, laboratory and imaging study orders and results and genomic and proteomic data elements. Identification of known patterns of existing diseases involves aggregation and analysis of these data elements by existing relationships. However, the identification of new patterns of disease requires more sophisticated pattern recognition analysis. Early recognition of new patterns requires data points available early in the disease presentation. Demographics, ordering patterns and resource use (e.g., ventilator or intensive care utilization pattern changes) are often available earlier in the presentation of non-predictable diseases. Consumer-generated information is also valuable with respect to surveillance efforts.	S.1.5 S.2.1.1 S.2.1.2 S.2.2.2 S.2.2.3 IN.1.6 IN.1.9 IN.2.2 IN.2.3 IN.2.4	1. The system **SHALL** provide the ability to aggregate patient information based on user-identified criteria.	491
					2. The system **SHALL** apply local privacy and confidentially rules when assembling aggregate data to prevent identification of individuals by unauthorized parties.	492
					3. The system **SHOULD** provide the ability to use any demographic or clinical information as criteria for aggregation.	493
					4. The system **SHOULD** present aggregate data in the form of reports for external use.	494
					5. The system **SHOULD** provide the ability to save report definitions for later use.	495
					6. The system **MAY** present aggregate data in an electronic format for use by other analytical programs.	496
					7. The system **MAY** provide the ability to derive statistical information from aggregate data.	497
					8. IF biosurveillance or other epidemiological investigations require standardized transmission of data to/from a registry or directory, THEN the system **SHALL** conform to function IN.3 (Registry and Directory Services).	498
DC.2.6.2	**F**	Support for Notification and Response	**Statement**: Upon notification by an external, authoritative source of a health risk within the cared for population, alert relevant providers regarding specific potentially at-risk patients with the appropriate level of notification. **Description**: After receiving a notice of a	S.1.3.6 S.2.2.2 S.3.7.1 S.3.7.4 IN.1.6	1. The system **SHALL** provide the ability to identify individual care providers or care managers within a cared for population.	499
					2. The system **SHALL** provide the ability to prepare a response notification to the care providers or care managers.	500

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			health risk within a cared-for population from public health authorities or other external authoritative sources: 1. Identify and notify individual care providers or care managers that a risk has been identified and requires attention; and 2. Provide suggestions on the appropriate course of action. A care provider now has the ability to decide how patients are notified, if necessary. For example, this function may be used after detection of a local outbreak of hepatitis A, advising providers of the at-risk population and potential prophylactic treatment. A second example might be the dissemination of new care guidelines for elderly patients with a specific chronic disease. Notifications to clinicians or patients may occur by telephone, email, FAX or other methods.	IN.1.7 IN.2.4 IN.3.1 IN.3.2 IN.4.1 IN.4.2 IN.4.3 IN.5.1 IN.5.2 IN.5.4	3. The system **SHALL** provide the ability to capture notification of a health risk within a cared-for population from public health authorities or other external authoritative sources as either free-text or a structured message.	501
					4. The system **SHOULD** provide the ability to coordinate with local and national programs to disseminate notifications of health risk to individual care providers or care-managers.	502
					5. The system **MAY** provide the ability to notify patients, directly or indirectly, who are described by the health risk alert.	503
					6. The system **SHOULD** present suggestions to the care provider indicating an appropriate course of action.	504
					7. The system **SHALL** provide the ability to notify public health authorities or other external authoritative sources of a health risk within a cared for population in accordance with scope of practice, organizational policy and jurisdictional law.	505
					8. The system **SHOULD** conform to function IN.3 (Registry and Directory Services).	506
DC.2.6.3	**F**	Support for Monitoring Response Notifications Regarding a Specific Patient's Health	**Statement**: In the event of a health risk alert and subsequent notification related to a specific patient, monitor if expected actions have been taken, and execute follow-up notification if they have not. **Description**: Identifies that expected follow-up for a specific patient event (e.g., follow up to error alerts or absence of an expected lab result) has not occurred and communicate the omission to appropriate care providers in the chain of authority. The notification process requires a security infrastructure that provides the ability to match a care provider's clinical privileges with the clinical requirements of the notification.	DC.1.6.1 DC.1.6.2 S.1.3.6 S.1.4.1 S.2.2.2 S.2.2.3 S.3.7.4 IN.2.4 IN.6	1. The system **SHALL** present specific actions to be taken at the patient level for a health risk alert.	507
					2. The system **SHALL** notify appropriate care providers of specific patient actions required by a health risk alert.	508
					3. The system **SHALL** provide the ability to identify those patients who have not received appropriate action in response to a health risk alert.	509
					4. The system **SHOULD** provide the ability to report on the omission of an appropriate response to the health risk alert in specific patients.	510
					5. The system **SHOULD** conform to function IN.1.4 (Patient Access Management).	511
					6. The system **SHOULD** conform to function IN.3 (Registry and Directory Services).	512

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
DC.2.7	**H**	Support for Knowledge Access			1. The system **SHOULD** conform to function IN.3 (Registry and Directory Services)	513
DC.2.7.1	**F**	Access Healthcare Guidance	**Statement**: Provide pertinent information from available evidence-based knowledge, at the point of care, for use in healthcare decisions and care planning. **Description**: The information available regarding disease, disease processes, diagnostic testing, pharmaceuticals, treatment patterns and all aspects of healthcare is constantly changing. The practitioner should be able to access a wide variety of sources that provide relevant, accurate information about any given subject. Examples of resources include, but are not limited to: evidence on treatment of specific medical conditions, maintenance of wellness, drug or device trials, context-specific information available through online journals, printed resources such as books and specialty organizations resources. For example, when a condition is diagnosed the provider might be directed to relevant resources that give updated clinical research, useful pharmaceutical combinations, surgical techniques, products or other information useful in the management of the specific condition under consideration.	S.3.7.1 S.3.7.4 IN.5.1 IN.5.2 IN.5.3 IN.5.4 IN.6	1. The system **SHALL** provide the ability to access evidence-based healthcare recommendations, with documentation of sources	514
					2. The system **SHOULD** provide the ability to access evidenced-based documentation appropriate for the care provider to render a timely judgment.	515
					3. The system **MAY** provide the ability to access external evidence-based documentation.	516
					4. The system **SHALL** conform to function DC.2.2.1.1 (Support for Standard Care Plans, Guidelines, Protocols).	517
					5. The system **SHOULD** conform to function IN.1.4 (Patient Access Management).	518
DC.2.7.2	**F**	Patient Knowledge Access	**Statement**: Provide the ability to access reliable information about wellness, disease management, treatments, peer support groups and related information that is relevant for a specific patient. **Description**: An individual will be able to find reliable information to research a health question, follow up from a clinical visit, identify treatment options, or other health information needs. The information may be linked directly from entries in the health record, or may be accessed	DC.3.2.4 DC.3.4.9 S.3.7.1 S.3.7.2 S.3.7.4 IN.1.4 IN.5.1 IN.5.3	1. The system **SHALL** provide the ability to access information about wellness, disease management, treatments, and related information that is relevant for a specific patient.	519
					2. The system **MAY** provide the ability to access information related to a health question directly from data in the health record or other means such as key word search.	520
					3. The system **MAY** provide the ability to access patient educational information from external sources.	521
					4. IF the information is external-based, THEN the system **MAY** provide the ability to identify links specific to the information.	522

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			through other means such as key word search. The information may be provided as part of the EHR system but may also include patient information from external databases or specific websites.	IN.5.4 IN.6	5. The system **SHALL** conform to function IN.1.4 (Patient Access Management).	523
					6. The system **SHALL** conform to function IN.1.9 (Patient Privacy and Confidentiality).	524
					7. The system **SHALL** conform to function IN.2.2 (Auditable Records).	525
DC.3	**H**	**Operations Management and Communication**			1. The system **SHALL** conform to function IN.1.1 (Entity Authentication).	526
					2. The system **SHALL** conform to function IN.1.2 (Entity Authorization).	527
					3. The system **SHALL** conform to function IN.1.3 (Entity Access Control).	528
					4. IF the system exchanges data across entity boundaries within an EHR-S or external to an EHR-S, THEN the system **SHALL** conform to function IN.1.6 (Secure Data Exchange) to ensure that the data are protected.	529
					5. IF the system exchanges data with other sources or destinations of data, THEN the system **SHALL** conform to function IN.1.7 (Secure Data Routing) to ensure that the exchange occurs only among authorized senders and ““receivers”.	530
					6. IF the system is used to enter or modify data in the health record, THEN the system **SHALL** conform to function IN.1.8 (Information Attestation) to show authorship and responsibility for the data.	531
					7. The system **SHALL** conform to function IN.1.9 (Patient Privacy and Confidentiality).	532
					8. The system **SHALL** conform to function IN.2.1 (Data Retention, Availability and Destruction).	533
					9. The system **SHALL** conform to function IN.2.2 (Auditable Records).	534
					10. The system **SHOULD** conform to function IN.2.3 (Synchronization).	535
					11. IF the system is used to extract data for analysis and reporting, THEN the system **SHALL** conform to function IN.2.4 (Extraction of Health Record Information) to support data extraction across the complete health record of an individual.	536

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
					12. IF the system stores unstructured data, THEN the system **SHALL** conform to function IN.2.5.1, (Manage Unstructured Health Record Information), to ensure data integrity through all changes.	537
					13. IF the system stores structured data, THEN the system **SHALL** conform to function IN.2.5.2 (Manage Structured Health Record Information) to ensure data integrity through all changes.	538
					14. IF the system processes data for which generally accepted standard terminologies have been established, THEN the system **SHALL** conform to function IN.4.1 (Standard Terminologies and Terminology Models) to support semantic interoperability.	539
					15. IF the system processes data for which generally accepted standard terminologies have been established, THEN the system **SHALL** conform to function IN.4.2 (Maintenance and Versioning of Standard Terminologies) to preserve the semantics of coded data over time.	540
					16. The system **SHOULD** conform to function IN.4.3 (Terminology Mapping).	541
					17. IF the system exchanges data for which generally accepted interchange standards have been established, THEN the system **SHALL** conform to function IN.5.1 (Interchange Standards) to support interoperability.	542
					18. IF the system exchanges data for which generally accepted interchange standards have been established, THEN the system **SHALL** conform to function IN.5.2 (Interchange Standards Versioning and Maintenance) to accommodate the inevitable evolution of interchange standards.	543
					19. The system **SHOULD** conform to function IN.5.3 (Standards-based Application Integration).	544
					20. IF the system exchanges data with other systems outside itself, THEN the system **SHALL** conform to function IN.5.4 (Interchange Agreements) to define how the sender and receiver will exchange data.	545
					21. The system **SHOULD** conform to function IN.6 (Business Rules Management).	546
					22. The system **SHOULD** conform to function IN.7 (Workflow Management).	547
DC.3.1	**H**	Clinical Workflow Tasking	**Statement**: Schedule and manage tasks with appropriate timeliness. **Description**: Since the electronic health			548

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			record will replace the paper chart, tasks that were based on the paper artifact must be effectively managed in the electronic environment. Functions must exist in the EHR-S that support electronically any workflow that previously depended on the existence of a physical artifact (such as the paper chart, a phone message slip) in a paper based system. Tasks differ from other more generic communication among participants in the care process because they are a call to action and target completion of a specific workflow in the context of a patient's health record (including a specific component of the record). Tasks also require disposition (final resolution). The initiator may optionally require a response. For example, in a paper based system, physically placing charts in piles for review creates a physical queue of tasks related to those charts. This queue of tasks (for example, a set of patient phone calls to be returned) must be supported electronically so that the list (of patients to be called) is visible to the appropriate user or role for disposition. Tasks are time-limited (or finite). The state transition (e.g. created, performed and resolved) may be managed by the user explicitly or automatically based on rules. For example, if a user has a task to signoff on a test result, that task should automatically be marked complete by the EHR when the test result linked to the task is signed in the system. Patients will become more involved in the care process by receiving tasks related to their care. Examples of patient related tasks include acknowledgement of receipt of a test result forwarded from the provider, or a request to schedule an appointment for a pap smear (based on age and			

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			frequency criteria) generated automatically by the EHR-S on behalf of the provider.			
DC.3.1.1	**F**	Clinical Task Assignment and Routing	**Statement**: Assignment, delegation and/or transmission of tasks to the appropriate parties. **Description**: Tasks are at all times assigned to at least one user or role for disposition. Whether the task is assignable and to whom the task can be assigned will be determined by the specific needs of practitioners in a care setting. Task-assignment lists help users prioritize and complete assigned tasks. For example, after receiving communication (e.g. a phone call or e-mail) from a patient, the triage nurse routes or assigns a task to return the patient's call to the physician who is on call. Task creation and assignment may be automated, where appropriate. An example of a system-triggered task is when lab results are received electronically; a task to review the result is automatically generated and assigned to a clinician. Task assignment ensures that all tasks are disposed of by the appropriate person or role and allows efficient interaction of entities in the care process.	S.1.3.1a S.1.3.5 IN.6	1. The system **SHALL** provide the ability for users to create manual clinical tasks.	549
					2. The system **SHALL** provide the ability to automate clinical task creation.	550
					3. The system **SHALL** provide the ability to manually modify and update task status (e.g. created, performed, held, canceled, pended, denied, and resolved).	551
					4. The system **MAY** provide the ability to automatically modify or update the status of tasks based on workflow rules.	552
					5. The system **SHOULD** provide the ability to assign, and change the assignment of, tasks to individuals or to clinical roles.	553
					6. The system **MAY** provide the ability to manage workflow task routing to multiple individuals or roles in succession and/or in parallel.	554
					7. The system **MAY** provide the ability to prioritize tasks based on urgency assigned to the task.	555
					8. The system **MAY** provide the ability to restrict task assignment based on appropriate role as defined by the entity.	556
					9. The system **MAY** provide the ability to escalate clinical tasks as appropriate to ensure timely completion.	557
					10. IF the system is used to enter, modify, or exchange data, THEN the system **SHALL** conform to IN.1.5 (Non-Repudiation) to guarantee that the sources and receivers of data cannot deny that they entered/sent/received the data.	558
					11. The system **SHOULD** conform to function IN.3 (Registry and Directory Services).	559

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DC.3.1.2	**F**	Clinical Task Linking	**Statement**: Linkage of tasks to patients and/or a relevant part of the electronic health record. **Description**: Clinical tasks must include information or provide an electronic link to information that is required to complete the task. For example, this may include a patient location in a facility, a patient's contact information, or a link to new lab results in the patient's EHR. An example of a well defined task is "Dr. Jones must review Mr. Smith's blood work results." Efficient workflow is facilitated by navigating to the appropriate area of the record to ensure that the appropriate test result for the correct patient is reviewed. Other examples of tasks might involve fulfillment of orders or responding to patient phone calls.	S.1.3.1 S.1.4.1 S.1.4.2 S.1.4.4 S.1.6 S.1.7 IN.2.3 IN.7	1. The system **SHALL** provide the ability to link a clinical task to the component of the EHR required to complete the task.	560
					2. The system **SHALL** conform to function IN.1.5 (Non-Repudiation).	561
DC.3.1.3	**F**	Clinical Task Tracking	**Statement**: Track tasks to facilitate monitoring for timely and appropriate completion of each task. **Description**: In order to reduce the risk of errors during the care process due to missed tasks, the provider is able to view and track un-disposed tasks, current work lists, the status of each task, unassigned tasks or other tasks where a risk of omission exists. The timeliness of certain tasks can be tracked, or reports generated, in accordance with relevant law and accreditation standards. For example, a provider is able to create a report to show test results that have not been reviewed by the ordering provider based on an interval appropriate to the care setting.	S.2.2.2 S.2.2.3 IN.2.4 IN.7	1. The system **SHALL** provide the ability to track the status of tasks.	562
					2. The system **SHALL** provide the ability to notify providers of the status of tasks.	563
					3. The system **SHOULD** provide the ability to sort clinical tasks by status.	564
					4. The system **MAY** provide the ability to present current clinical tasks as work lists.	565
					5. The system **SHOULD** provide the ability to define the presentation of clinical task lists.	566
					6. IF the system is used to enter, modify, or exchange data, THEN the system **SHALL** conform to IN.1.5 (Non-Repudiation) to guarantee that the sources and receivers of data cannot deny that they entered/sent/received the data.	567
					7. The system **SHOULD** conform to function IN.3 (Registry and Directory Services).	568
DC.3.2	**H**	Support Clinical Communication	**Statement**: **Description**: Healthcare requires secure communications among various		1. The system **SHOULD** conform to function IN.3 (Registry and Directory Services).	569

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			participants: patients, doctors, nurses, chronic disease care managers, pharmacies, laboratories, payers, consultants, and etcetera. An effective EHRS supports communication across all relevant participants, reduces the overhead and costs of healthcare-related communications, and provides automatic tracking and reporting. The list of communication participants is determined by the care setting and may change over time. Because of concerns about scalability of the specification over time, communication participants for all care settings or across care settings are not enumerated here because it would limit the possibilities available to each care setting and implementation. However, communication between providers and between patients and providers will be supported in all appropriate care settings and across care settings. Implementation of the EHRS enables new and more effective channels of communication, significantly improving efficiency and patient care. The communication functions of the EHRS will eventually change the way participants collaborate and distribute the work of patient care.			
DC.3.2.1	**F**	Support for Inter-Provider Communication	**Statement**: Support exchange of information between providers as part of the patient care process, and the appropriate documentation of such exchanges. Support secure communication to protect the privacy of information as required by federal or jurisdictional law. **Description**: Communication among providers involved in the care process can range from real time communication	DC.1.1.3 DC.1.9.5 S.1.3.1a S.1.3.2 S.1.3.3 S.1.3.4 S.2.2.2	1. The system **SHALL** provide the ability to document in the patient record verbal/telephone communication between providers.	570
					2. The system **SHALL** provide the ability to incorporate scanned documents from external providers into the patient record.	571

ID#	Type	Name	Statement/Description	See Also	Conformance Criteria	Row #
			(for example, fulfillment of an injection while the patient is in the exam room), to asynchronous communication (for example, consult reports between physicians). Some forms of inter-practitioner communication will be paper based and the EHR-S must be able to produce appropriate documents. The system should provide for both verbal and written communication. These exchanges would include but not limited to consults, and referrals as well as possible exchanges within the office as part of the provision and administration of patient care (for example, the communication of new information obtained within the office environment during the process of administration of a tetanus shot while the patient is in the exam room). The system should support the creation and acceptance of paper artifacts where appropriate.	IN.1.5 IN.1.6 IN.1.7 IN.1.9 IN.2.2. IN.3.1 IN.5.1 IN.5.2	3. The system **MAY** provide the ability to communicate using real-time messaging.	572
					4. The system **SHOULD** provide the ability to communicate clinical information (e.g. referrals) via email or other electronic means.	573
					5. The system **MAY** provide the ability to transmit electronic multi-media data types representing pictures, sound clips, or video as part of the patient record.	574
					6. The system **SHALL** conform to function IN.1.5 (Non-Repudiation).	575
DC.3.2.2	**F**	Support for Provider - Pharmacy Communication	**Statement**: Provide features to enable secure bi-directional communication of information electronically between practitioners and pharmacies or between practitioner and intended recipient of pharmacy orders. **Description**: When a medication is prescribed, the order is routed to the pharmacy or other intended recipient of pharmacy orders. This information is used to avoid transcription errors and facilitate detection of potential adverse reactions. If there is a question from the pharmacy, that communication can be presented to the provider with their other tasks. The transmission of prescription data between systems should conform to realm acceptable messaging standards. As an example, specific standards in the	S.3.7.1 IN.1.5 IN.1.6 IN.1.7 IN.1.9 IN.2.2 IN.3.1 IN.4.1 IN.4.2 IN.4.3 IN.5.1 IN.5.2 IN.5.3	1. The system **SHALL** conform to function DC.1.7.1 (Manage Medication Orders) and provide the ability to order medications.	576
					2. The system **SHALL** electronically communicate orders between the prescriber, provider and pharmacy, as necessary, to initiate, change, or renew a medication order.	577
					3. The system **SHALL** receive any acknowledgements, prior authorizations, renewals, inquiries and fill notifications provided by the pharmacy or other participants in the electronic prescription and make it available for entry in the patient record.	578
					4. The system **SHOULD** provide the ability to electronically communicate current realm-specific standards to pharmacies.	579
					5. The system **MAY** provide the ability for providers and pharmacies to communicate clinical information via e-mail or other electronic means, on both general and specific orders.	580

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			United States include the most recent versions of criteria from Health Level 7 (HL7), X12N, and/or the National Council for Prescription Drug Programs (NCPDP); and those of the National Electronic Claims Standard (NeCST) in Canada. It is anticipated that other realms may list other acceptable messaging standards.	IN.5.4 IN.6 IN.7	6. The system **MAY** provide the ability to use secure real-time messaging.	581
					7. The system **MAY** provide the ability to include workflow tasks as part of communication to the provider.	582
					8. IF the system is used to enter, modify, or exchange data, THEN the system **SHALL** conform to IN.1.5 (Non-Repudiation) to guarantee that the sources and receivers of data cannot deny that they entered/sent/received the data.	583
DC.3.2.3	**F**	Support for Communications Between Provider and Patient and/or the Patient Representative	**Statement**: Facilitate communications between providers and patients and/or the patient representatives. **Description**: Providers are able to communicate with patients and others, capturing the nature and content of electronic communication, or the time and details of other communication. Examples: • When test results arrive, the clinician may wish to email the patient that test result was normal (details of this communication are captured). • A patient may wish to request a refill of medication by emailing the physician. • Patients with asthma may wish to communicate their peak flow logs/diaries to their provider. • Hospital may wish to communicate with selected patients about a new smoking cessation program.	DC.1.1.3 DC.1.11.3 S.1.3.6 S.1.4.1 S.3.5.1 S.3.5.3 S.3.5.4 S.3.7.1 S.3.7.2 S.3.7.3 S.3.7.4 IN.1.5 IN.1.6 IN.1.7 IN.1.9 IN.2.2 IN.6	1. The system **SHALL** provide the ability to capture documentation of communications between providers and patients and/ or the patient representatives.	584
					2. The system **SHALL** provide the ability to incorporate scanned documents.	585
					3. The system **SHALL** provide the ability to document communication originating with the patient or patient representative (e.g. date, entity, details of communication).	586
					4. The system **SHOULD** provide the ability to communicate between providers and patients or their representative using a secure internet connection.	587
					5. The system **SHALL** provide the ability to manage documentation regarding family member or patient representative authorizations to receive patient related health information.	588
					6. The system **SHOULD** alert providers to the presence of patient or patient representative originated communications.	589
					7. The system **SHOULD** provide the ability to alert patients or patient representative to provider absences (e.g. vacations) and recommend rerouting of the information or request.	590
					8. The system **MAY** provide the ability to notify providers of events and new treatment options.	591
					9. The system **MAY** provide the ability to remind the patient or patient representative of events related to their care (e.g. upcoming appointments) as agreed upon by the patient and/or the patient representative.	592
					10. The system **SHALL** conform to function IN.1.4 (Patient Access Management).	593

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					11. IF the system is used to enter, modify, or exchange data, THEN the system **SHALL** conform to IN.1.5 (Non-Repudiation) to guarantee that the sources and receivers of data cannot deny that they entered/sent/received the data.	594
DC.3.2.4	**F**	Patient, Family and Care Giver Education	**Statement**: Facilitate access to educational or support resources pertinent to, and usable by, the patient or patient representative. **Description**: The provider or patient is presented with a library of educational materials. Material may be made available in the language or dialect understood by the patient or representative. Material should be at the level of the patient or representative's level of understanding and sensory capability. Special needs are documented. Material may be disseminated via a mode available to and acceptable by the patient e.g., printed, electronically or otherwise. The review of material between the clinician and the patient, and the patient's understanding of the review, is documented when desired by the clinician. The patient or patient's representatives are able to obtain educational information independently without formal review with the clinician if desired.	DC.2.1.4 DC 3.2.3 S.3.5.1 S.3.5.3 S.3.5.4 S.3.7.1 S.3.7.2 S.3.7.4 IN.1.4 IN.1.6 IN.1.7 IN.1.9 IN.2.2	1. The system **SHALL** provide the ability to access to a library of educational material for health concerns, conditions, and/or diagnosis.	595
					2. The system **SHALL** provide the ability to communicate applicable educational materials to the patient and/or patient representative.	596
					3. The system **MAY** provide the ability to deliver multilingual educational material.	597
					4. The systems **MAY** provide the ability to deliver patient educational materials using alternative modes to accommodate patient sensory capabilities.	598
					5. The system **MAY** provide the ability to access to external educational materials.	599
					6. The system **MAY** provide the ability to use rules-based support to identify the most pertinent educational material, based on the patient health status, condition and/or diagnosis.	600
					7. The system **MAY** provide the ability to document who received the educational material provided, the patient, or the patient representative.	601
					8. The system **MAY** provide the ability to document that the educational material was reviewed with the patient and/or patient representative and their comprehension of the material.	602
					9. The system **MAY** provide the ability to identify age-appropriate and/or reading-ability appropriate educational materials for the patient and/or patient representative.	603
					10. The system **MAY** provide the ability for direct access to the educational material available, by patients and/or patient representatives.	604
					11. The system **SHALL** conform to function IN.1.4 (Patient Access Management).	605
					12. IF the system is used to enter, modify, or exchange data, THEN the system **SHALL** conform to IN.1.5 (Non-Repudiation) to guarantee that the sources and receivers of data cannot deny that they entered/sent/received the data.	606

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DC.3.2.5	**F**	Communication with Medical Devices	**Statement**: Support communication and presentation of data captured from medical devices. **Description**: Communication with medical devices is supported as appropriate to the care setting such as an office or a patient's home. Examples include: vital signs/pulse-oximeter, anesthesia machines, home diagnostic devices for chronic disease management, laboratory machines, bar coded artifacts (medicine, immunizations, demographics, history, and identification), etc.	IN.1.1 IN.1.2 IN.1.3 IN.1.6 IN.1.7 IN.1.9 IN.4.1 IN.4.2 IN.4.3 IN.5.1 IN.5.2 IN.5.3 IN.7	1. The system **SHALL** provide the ability to collect accurate electronic data from medical devices according to realm-specific applicable regulations and/or requirements.	607
					2. The system **SHOULD** provide the ability to present information collected from medical devices as part of the medical record as appropriate.	608
					3. The system **SHOULD** conform to function IN.1.4 (Patient Access Management).	609